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JULY, 1881.

ANOTHER ABUNDANT HARVEST is assured in the United States and the neighboring Provinces, for, with here and there an exception which can have no effect on the general result, all reports are exceedingly favorable. With plenty of cheap land, and the very best, with a sparse population, and diversity of climate, we are favored above the nations of the world. The greatest blessings are seldom appreciated, and we scarcely think that the people of America, who have enjoyed such a succession of glorious harvests of grain and vegetables and fruit, have the least idea that they receive more than they deserve and have a right to expect, and have fairly earned by industry and skill. The truth is, however, that we are more indebted to circumstances for success than to any wisdom of our own. We truly have more than enough, the soil produces more than we can consume, so we have millions upon millions of dollars worth of wheat, corn, meat, cheese, &c., to dispose of in the markets of the world. If, however, our population was as dense as in many countries of Europe, so that the soil did not produce enough to feed the people, and we were compelled to purchase of food in other countries, the state of things would be far different, and what the result would be time in the future may tell. It is not well, therefore, to lay "the flattering unction to our souls" that we are wiser and better than people of other countries, who have to struggle to keep "the wolf from the door."

It is well, however, that we should enjoy our prosperity, the evidences of which we see all

over the land, in city, village, and country, in improved and tasteful dwellings and gardens and lawns and flowers and school-houses and churches, in neatly-dressed children and happy parents, excursions and rides and summer-travel, and other evidence of abundance, happiness, and good feeling.

These reflections were caused by the receipt from an English friend of a London journal containing an article on "Our Agricultural Future," showing that "British agriculture has entered upon a period of unparalleled crisis." For wheat, it is stated, England paid America, in 1880, more than a hundred million dollars; while for food imported into England, nearly six hundred millions of dollars were paid to foreign countries. How long the country can bear this drain, and how it can be prevented, or, at least, lessened, is a question that is engaging the attention of the best minds of that country. But for the fact that England has been the workshop of the world, and is so still to a great extent, the country would, of course, soon become bankrupt. This excessive importation, it is claimed, results from two causes. The high rent farmers have to pay for the use of the land absorbs all they can make, so that they become discouraged, throw up their leases, gather up their household gods, and emigrate to the United States, Canada, or Australia. Many farms are without tenants and the land uncultivated. Old leases, made at fair prices when times were different, now prove millstones around the necks of the cultivators. The journal remarks that "it has come to this, that our

farmers are fairly and squarely beaten in their own markets. It is a question how long it will be possible for the British farmer to pay rent and subsist. The vast extent of American land, its cheapness, its fertility, the ease with which it can be worked, the low cost of carriage, are all stubborn factors in the difficult problem which British agriculturists have to face." Rent, it is suggested, may be reduced, but we scarcely think the English farmer could pay three per cent. on a fair estimate of the value, with taxes and poor rates. He would still have to compete with the wheat and meat growers of the West, who get their land for nothing, and have thousands of acres for cattle ranges without money or price. The facilities for reaching the ocean are constantly increasing, and prices are becoming lower, while ocean rates are reduced to almost a nominal price.

As before observed, this subject is enlisting the earnest thought of the best men of the country, and as yet there seems no efficient remedy suggested. But then, English statesmen are slow; American editors and Irish-American orators could in a few minutes arrange the whole matter satisfactorily and have lots of time to spare—in their own opinion.

We rejoice not at the adversity of any nation or class, even though their loss may result in our gain. England has been the light of the world in literature, science, and agriculture, and the staunch defender of human rights. She has bravely endured many shocks, and spoiled the reputation of many gloomy prophets, and soon this cloud will dissolve and the sun of prosperity shine upon the agricultural interests of the brave little British Isles.

SALVIAS.

Difference in time of blooming contributes to the interest of flowering plants. The *Salvias* in the open ground bloom in autumn, and this later season, in connection with their peculiar form, so unlike most other flowers, makes them unusually attractive. The colored plate in this number presents some of the most valuable varieties in cultivation. The highly-prized *Salvia splendens* is readily recognized at the left, on the bottom of the plate. At the right, in connection with it, is a variety from *S. splendens*, known as *S. splendens alba*. It has the general appearance and habit of *S. splendens*, differing from it essentially only in the color of its flowers.

The large blue flower represents *S. patens*. Nothing can excel the exquisite color of this *Salvia*, and scarcely can there be found a flower that will equal it in depth and purity.

The blue flower that most nearly resembles *Salvia patens* in color is *Delphinium formosum*; in fact, they suggest each other, but *S. patens* continues long after the *Delphiniums* have passed out of bloom.

The rose-colored variety at the upper and left side of the plate is *S. rosea*, and that opposite to it, at the right, is *S. marmorata nana*, remarkable for its white and scarlet striped calyx and corolla. It will be noticed that the calyx, as well as the corolla, in both *S. splendens* and *S. splendens alba*, is a conspicuous and showy part of the flower.

These *Salvias* are of easy culture, and are excellent for planting out in the late spring, after all frosts are past; the latter part of summer they commence to flower, and continue until destroyed by the frosts. In mixed beds these plants present a variation from the ordinary low forms of *Pelargoniums*, and most other bedding plants, as they grow erect, sending out numerous branches, each of which is terminated by a raceme of flowers.

A fine plant of *Salvia splendens* in full bloom is a blaze of scarlet, and is a most fascinating object. Plants of the different colors growing near each other harmonize and contrast with wonderful effect.

The greenhouse and the window-garden may be enlivened during the early winter months by these plants, and a good way to raise them for this purpose is to strike cuttings in early spring, and, after bringing them along through the earlier stages of growth, and shifting them finally into five or six-inch pots, to plunge the pots in the border and leave them through the summer, giving them proper attention in watering and otherwise. Before the frosts come, the plants should be lifted and taken in. They will continue several months in bloom.

The *Salvias* cultivated for ornament are members of the same family, botanically, as the garden Sage, and are distinguished not only by the two-lipped, or bilabiate, corolla, but by their square stems and opposite leaves. In the southern part of the country, some of them can be wintered over in the garden, by giving them a protecting covering of leaves in the fall. New varieties are frequently produced by hybridizing, and many such will yet be brought out, as many have been in the past. *S. splendens* is easily raised from seed sown very early in spring, under glass, and, when well grown, comes into bloom as promptly in autumn as plants from cuttings. In the same manner may be raised *S. Roemeriana* and *S. coccinea splendens*, both varieties with showy, scarlet flowers; so, also, *S. bicolor*, which is blue and white. *S. Hoveyi* has a very large, handsome, purple flower.

STREET-TREES AND PUBLIC GROUNDS.

The best results in planting street-trees are attainable when there is concert of action by the entire community in relation to the subject. Such concerted action indicates considerable advancement, or a general spread of horticultural taste, and, naturally, the best examples of it might be expected to be found in the oldest parts of the country. But the migratory character of our people greatly modifies the formative conditions of society. The most enterprising and well-informed persons are often leaders in new communities, and exercise great influence in shaping their features; so, in some of the new towns and villages of the west, there are found handsome, broad streets and avenues lined with trees, and public squares and parks, while many of the older villages are yet as deplorably destitute in these respects as at their beginning.

During the summer season, with heat almost tropical, the shade of trees in passing along the streets is gratefully appreciated. What are the best trees for street-planting, and what the best modes of planting, are questions of general interest.

To say that street-trees ought to be planted in the street may seem a superfluous statement; nevertheless, many a place would be the better if this simple rule had been observed. Formerly it was more customary than now to plant a row of trees along the fronts of lots, within a foot or two of the street-line. The advantage of thus placing trees is apparent, since they were there protected by good fences, and were thus secure against injury from horses and cattle. This security it is far better to obtain by proper guards to the trees when necessary; but, fortunately, in most localities, the necessity of protection no longer exists. The row of trees across the front rendered it almost, if not quite, impossible to plant the grounds with any effect in the modern style. The trees intended for shade of the sidewalk should, therefore, be always planted along its outer edge and next to the roadway. The first step to any improvement in many old grounds is to cut away the row of trees along the front.

While we plant trees on our grounds with special reference to the ornamental effects of their outlines and the beauty of their foliage, the primary object in street-planting is ample and lasting shade during the summer season. Our first inquiry, then, is how this object may best be secured. Trees are subjects of comparatively slow growth; a generation that witnesses the planting of certain trees may pass away and

yet the trees be young and only partially developed. It is only natural and quite proper that the planter himself should desire to experience the benefit of shade from trees of his own planting. Keeping in mind the space required for their perfect development, and yet aiming at useful results as speedily as possible, it has become evident by long experience and observation that street-trees should be planted twice as close as it is proper for them ultimately to stand, and when necessary every other tree should be cut away. Planting the trees thus closely, eighteen or twenty feet would be proper distances; so that, at last, after thinning out, they shall stand thirty-six or forty feet apart.

Sugar Maples planted thirty feet apart in good soil, and with all conditions favorable, will not touch the extremities of their most extended branches in twenty years from planting;



SUGAR MAPLE.

they will not fairly fill the space in thirty years. If Sugar Maples should be planted twenty feet apart, and, when fifteen or twenty years old, every other one cut out, their heads would never form a close or compact row. This species of Maple is the slowest-growing of our best street-trees, but it is also one of the best.

The American Elm, although it has a fine spreading head, in its early years is apt to be straggling, having a few main branches with an open center, and giving but slight shade. Forty feet is not too great a distance for American Elms when fully developed, but it requires many years to produce rows of them that will give the desired shade in midsummer on streets and avenues.

In employing either the Sugar Maple or the American Elm, and planting the trees at the wide distances, thirty-six or forty feet, as has been supposed, a more rapidly growing tree



AMERICAN ELM.

with ample foliage planted intermediately would in a few years greatly assist in producing shade. The Silver-leaved Maple, *Acer dasycarpum*, is well adapted to this purpose, having good, broad foliage, a spreading head, and is a rapid grower. In fifteen or twenty years after planting, the Silver Maples should be cut out and the Elms or Hard Maples allowed the full room. By adopting this method of planting a satisfactory amount of shade may be attained in the shortest time. Such desirable trees as the American Elm and the Hard Maple will ultimately line the street. And they will then stand sufficiently far apart for their full development.

The American or White Elm, *Ulmus Americana*, with its full-formed, ample, over-arching head and drooping branches, is one of the handsomest and most serviceable of trees for the street. It is one of the most picturesque objects of our landscapes, exhibiting both grace and strength harmoniously united. We accede it the first place as a street tree. But it would not do to use any one kind exclusively; however beautiful it may be its charms will stale by continuous presence.

The English Elm, *Ulmus campestris*, is a tree of rapid growth that ultimately attains a large size, of from fifty to seventy-five feet in height. It sends out its branches at a wider

angle than the White Elm, in fact, nearly horizontally, presenting an expression of grandeur and strength. It is truly magnificent in all its proportions. The wood of this tree is very valuable for many purposes, while that of the White Elm is almost useless. The English Elm is a very valuable street tree, and, at the west, we believe it will yet take a high rank as a timber tree, and be extensively planted for its economic uses.

The Hard, or Rock Maple, *Acer saccharinum*, is very properly a favorite street-tree, although it is of slow growth. It is one of the most durable of trees, possesses a heavy foliage and forms a large, erect, symmetrical head. In the fall the leaves assume brilliant scarlet and crimson tints, and remain in this condition longer than those of any other of our native trees. This tree is the crowning glory of our autumn landscapes. The timber is of the highest value, being characterized by great strength and density.

The Silver-leaved Maple, *Acer dasycarpum*, is very extensively employed as a street-tree, for which purpose it is adapted by its rapid growth, large, spreading head, which, in some old trees, takes a form somewhat like the White Elm, and by its handsome, deeply-cut leaves that are silvery on the under side, and which are supported by long, slender petioles, al-



ENGLISH ELM.

lowing them, like those of the Poplar, to be swayed by the slightest breeze. The timber is not strong, and the branches are often split or broken by the winds. The trees are greatly

improved in form by frequently cutting in the branches, or heading back, during the early years of growth.

The Norway Maple, *Acer platanoides*, a European species, is comparatively a low and broad-headed tree, with large leaves, bright and



SILVER-LEAVED MAPLE.

shining on both sides, and the foliage quite dense. It grows somewhat slowly at first, but when well established makes a very fair annual growth. Its handsome foliage and broad-spreading head make it an excellent street-tree.

The European Sycamore Maple, *A. pseudo-platanus*, is a beautiful tree, with a spreading head and dense foliage. The leaves are large and handsome. It thrives well in this country and is a valuable tree for the street, rising from fifty to seventy-five feet high. It grows more rapidly than the Sugar and the Norway Maple.

Both the Butternut and the Black Walnut are often found on country roadsides, where, on hot and sultry days, they arouse the liveliest emotions of gratitude in the breast of the weary traveler oppressed by the noon-day sun. But they have never been much employed as street-trees, on account of their thin foliage in their earlier years, and, in fact, it never becomes very dense. Both the fruit and the wood of these are quite valuable, and occasionally a spot may be found where one can be planted to advantage on the street.

The American Linden, or Bass-wood, is a handsome street-tree, and the European Linden, *Tilia Europæa*, is still finer, but both of

them are so subject to the attacks of an insect, the *Saperda vestita*, whose larva bores into the trunk of the tree, that they are now seldom planted as street-trees. They are well adapted for this purpose, and the fragrance of their bloom is almost proverbial. It is to be regretted that they should have so insidious and persistent an enemy.

The Horse Chestnut has been much used as a street-tree, and, when in bloom, it is one of the most beautiful objects in the whole vegetable kingdom. Its leaves push out early in spring, but decay early in fall, and it makes much litter when it drops its burrs and nuts in autumn. It is most too compact and round-headed for shade. It deserves an occasional place, but not general use as a street-tree.

The variety of Elms for street purposes may be increased by the use of Clemmer's Elm and the Cornish Elm, both of which are varieties of the English Elm, *U. campestris*. A species known as *U. Dovæi* is, also, well adapted to the purpose. All of these last named Elms are still scarce and high-priced, whereas, any of the other trees described are plentiful and cheap.

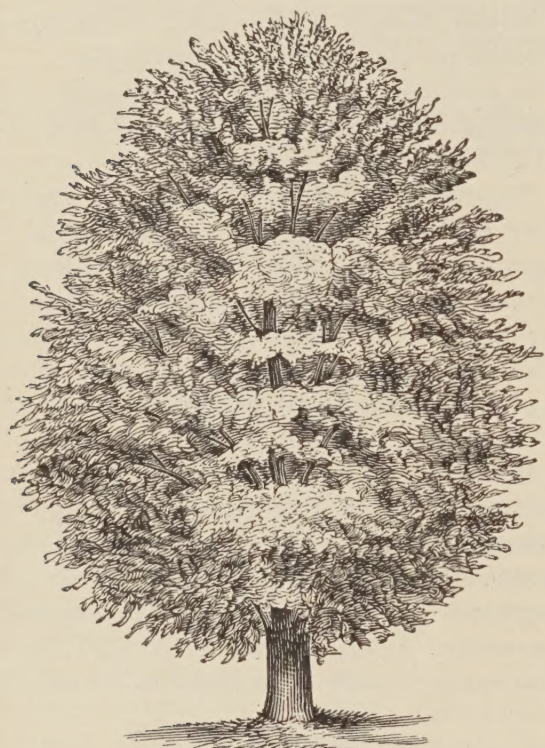
The conditions are necessarily such that a tree planted in the street cannot appear to the best advantage, its beauty is subordinated to its use, it must be trained to branch high in order to be out of the way of pedestrians and vehicles. Private lawns and public squares and parks furnish the opportunity of producing perfect and un mutilated specimens of trees. The examples of extensive parks furnished by our largest cities cannot possibly be imitated by the smaller



NORWAY MAPLE.

towns and villages; but because an area of hundreds of acres cannot be maintained as ornamental ground, there is no reason why fifty,

or twenty, or ten, or two acres may not be. There is no village but may have its village green, with its trees and shrubs, its walks and seats, and retreats, and whatever may add to the pleasure and convenience of those who shall resort to it for pleasure and health. There is a great work to be done in all parts of the country in providing these places of public resort, whether as small or larger places, and designated as greens, or squares, or parks. Our medium-sized cities have, usually, several squares of two or three or five acres in extent, and these add greatly to the beauty, comfort, and health of the citizens; some of the best



SYCAMORE MAPLE.

villages are similarly supplied, but, as a rule, country villages have made no provision in this respect. This is an oversight and should be remedied; a village of only a thousand inhabitants would experience great advantages and comfort in a well-planned, well-planted, and well-kept pleasure ground. The expense of land in small villages is comparatively little, and there is no reason why public grounds may not as well be maintained in such places as in larger ones. We wish that our readers might be leaders of public opinion in regard to this matter in those places where there are no public grounds. The advantages of establishing such places of resort are so apparent that a little energetic work in some communities will be sure to be crowned with success.

Possibly, in the future, something more may be offered on this subject, together with illustrated plans of squares and park grounds of small and medium size.

FLOWERING SHRUBS.

It is now a good time to look around and see the gardens of neighbors, and, if possible, a somewhat extended journey would be of advantage. Many of the flowering shrubs are now in bloom, and it is better to see for ourselves than to read the best description that can possibly be written. Illustrations are of great assistance, and, for this reason, we use them freely; but it is as impossible to describe or paint some flowers as it would be to paint the rainbow. By a little observation when plants are in flower, we can suit our taste, and thus save a good deal of disappointment in growing plants that do not please.

The Lilacs have just passed blooming in this section, and we never beheld a finer display in any part of the world. For two or three weeks they were perfectly gorgeous.

The Double Hawthorns are now in all their glory, and it would be hard to conceive of any shrub more truly magnificent. The rose and scarlet varieties are wreaths of flowers. The white does not seem to flower so freely, but makes more growth. A heavy mulch around each tree will do something toward keeping off the mildew of the leaf, which is apt to injure this beautiful shrub late in the season.

The White Fringe, with flowers looking like a delicate fringe, is now in flower at the North. For a week during the blooming time there is nothing handsomer.

The Snow Ball is just showing its white balls, and for a time will be among the chief ornaments of our lawns, until the Syringas attract special attention by their snowy beauty and wonderful fragrance.

The Purple Fringe, or Smoke Tree, is beginning to show its flowers, but its beauty is in the future, which is somewhat late, but lasting.

The Wiegels are in perfection, and there are few handsomer shrubs in the world than the old *Weigela rosea* as it came to us from China.

The Tartarians, or Upright Honeysuckles, are interesting shrubs, pretty and delicate alike in foliage and flower.

Among the trees with conspicuous flowers we notice the Double-flowering and Scarlet Chestnuts are now in their prime, and truly grand to look upon. Once they were somewhat common, but they have shared in the unpopularity of the common White Horse Chestnut, of which it would be difficult to find a tree in any of our nurseries.

The Golden Chain, or Laburnum, is doing better than in many years. In this section it usually suffers a little with the winter, but this spring we have not noticed an injured shoot.



A MORNING IN THE GARDEN.

My gardening-tools are a trowel, a kitchen-sieve, an old three-pronged table fork, a pair of scissors, a coal-scuttle full of leaf-mould, an old basket for rubbish, an old tin-pan for sifting the mould into when I do not sift it directly over the seeds, and last, but not least, a light, broad board for sitting or standing on, and oh, yes, my box of seeds.

I am going to do what I suppose you would hardly approve of, sow seeds in the open ground; but it is the only way that I can succeed, excepting in boxes out doors. I have lost most of my choice annuals sent me by my good friend, Col. W., of San Francisco, by sowing in boxes, pots and pans indoors early in the season. SATIRICA says I "kill them with kindness." (If this should chance to meet the eye of my friend, I will say, if he will send me some more I will plant them out doors and let them alone.)

First of all, I must get this dwarf *Ageratum* into the ground; it is a lovely little thing. I saw it in Mr. C.'s garden last summer, and gathered some seeds right away, without stopping to ask permission, as Mr. C. was not at home. If he objects, I hope he will accept this open confession of petty larceny as sufficient atonement, and not come and claim the flowers when in bloom,—ah, you would admire his garden, dear reader! But to return to my work; I am going to sow my seed in the mixed border, under my window. I find an open space, dig it, and smooth it nicely, and scatter the seeds thinly, then sift just enough leaf-mould over them to cover them, and press it down with my trowel, (it is a mason's trowel, by the way.) I put a little grapevine fence around, so I wont forget and dig them up. In digging, however, I have scattered the bird's corn-meal, and yonder is one of the Song-Sparrows sitting patiently, waiting for me to leave, so that she can get her lunch, for she is sitting somewhere in the grass below the garden, and, as she has no time to hunt for food, it is a great convenience to find a free lunch always ready.

The dear little brown mother must not be disappointed, so I leave my work, or play, and get some meal and put it beside the water dish, and then come indoors, that she may sup at her leisure; that is why I am writing in the midst of my gardening. I glance out the window and see other visitors. Here are the Cat-birds, come to lunch and to see what is going on. They have a great deal of curiosity, and glance about at the various implements, dip into the leaf-mould, balance on the edge of the big basket, and then help themselves to the corn-meal; they eat heartily, and then, to pay for their entertainment, hop the length of the border, picking up a worm here, and a beetle there—nothing comes amiss. They are my most useful assistants as well as cherished friends. They see me at the window, but take no further notice than a friendly glance now and then.

You may have been wondering all this time what that brush-fence is for. It extends from the end of the house to the grapery, and it is stoutly built of brush, with a topping of grapevines. That rough structure, dear reader, is a delight to the birds, and to me, too. In summer it disappears under a mass of greenery—Morning Glories, Nasturtiums, Wild Balsams, and Cucumber vines completely hide it. There is a row of tall-growing plants, too, alongside, such as Hollyhocks, Perennial Phlox, and Tiger-Lilies. That brush-fence is one of the lures that I have set for my feathered-friends; it is wild, and birds love wildness; it affords them cover and secures seclusion; two things necessary to successful bird-culture. And, it is a test by which I try the boys of the neighborhood. Yonder is a boy going through the grapery, between the bars of the trellis. If you notice, he has a clean face and bright look; that is a nice boy. The bad boys go over the fence, some of them even break it down at the end farthest from the house, but those are sneaks, and, I am happy to say, there are not a great many of them about.

My garden is peculiar in several respects; it suggests coolness and quiet, there is plenty of

grass, the richest, greenest, and I may add, the longest grass that I see anywhere. It is seldom cut, for I cannot swing a scythe, and would not if I could. Dear sister gardeners, there are some things you must never, never do; this is one, and trundling a wheelbarrow is another, and spading is a third. There are a goodly number of trees, a wild Cherry and an old-time sweet-heart Cherry tree, both on purpose for the birds; they are quite close to the house, and I can sit at my window and study the little creatures without any trouble to myself or annoyance to them.

Another thing you would notice if you should call in mid-summer, would be the absence of the common bedding-plants, such as Geraniums, foliage-plants, and all sorts of expensive things, for, as I have little money, but plenty of time and no end of patience, all my flowers are raised from seed. I write this for the encouragement of ladies and children who love flowers but think they cannot afford them. It is possible to have a lovely garden, a true Paradise, at very little cost. I have spent just twenty cents on my garden this year. What did I buy? If you only had twenty cents to spend for flower seeds, what would you buy? I will tell you what I bought: an ounce of Sweet Peas, a packet of *Nemophila insignis*, and a paper of Mignonette. Of course I have plenty of seeds of my own saving, and some that kind friends gave me, but for one dollar enough annuals may be bought to make a very pretty garden. My specialty is Pansies. I always manage to have a few, and some seasons I have a great many of them; at present I have a little colony in full bloom, and what a delight to me they are! I think there is no flower that will afford so much pleasure, take it all the year round, as the bright and beautiful little Pansy, heartsease, indeed! The plants endured the cold weather very well, excepting some of them that were thrown out of the ground by the frost, but that was my fault, not theirs; they were not properly covered.—JENNY DARE.

FENCES.—A subscriber, at Hazleton, Iowa, writes: "I think if you were to live one summer in this part of Iowa, you would not advocate doing away with fences. Only a week ago, one morning I found my flower beds, and some of my vegetable beds all trodden over with horses." It will not, of course, do to dispense with fences where animals are permitted to run at large. When countries become settled it is a great deal better to compel the owners of animals to fence them in than to compel all their neighbors to fence them out.

BULBS IN THE GARDEN.

MR. VICK:—I was much interested in the article of "An Old Gardener" in the June number of the MAGAZINE, but I wish to call attention to one or two things important to the beginner, which were not alluded to by your correspondent. Hyacinths and Tulips are so large and showy that a large mass is not needed to make a very good display, and this is fortunate, for nothing harms a bed so much as walking over it in weeding; so always make narrow beds, so that the center can be reached from either side. A great deal in the North depends upon winter covering. Most winters bulbs will receive great injury unless they are protected by a covering of leaves or coarse manure. This I have proved by many years experience. I do not think it is severe cold that injures the bulbs so much as changes of temperature, freezing and thawing. A covering prevents a good deal of this. I have noticed that Tulips and Hyacinths that have been grown here for several years are not so much affected as newly imported bulbs. Hyacinths deteriorate in this country, but I have Tulips in my garden, now in bloom, just as fine as when I first obtained them, ten years ago. For a year or two I was troubled with the mice. My covering made a very nice shelter for field mice, and my bulbs seemed to furnish pretty good winter rations, for half of them were eaten up before spring. I tried poisoned meal for one season, and with some good effects, but I observed in your GUIDE for the autumn of 1876, I believe, a remedy that has proved entirely successful. This was to allow the ground to freeze pretty hard on the surface before putting on the covering. I disliked to do this, for I wished the bulbs to be in unfrozen ground during the winter, believing that they make much root-growth during that period if the ground is not frosty, and they are thus prepared for pushing strong in the early spring. I do not find any difference in this respect, however, and presume it is because I do not permit the frost to get very deep.

I don't know why it should be so, but Lilies, with me, suffer more from freezing and thawing than any bulbs I have, unless well covered. One winter I neglected covering, and I believe half of the bulbs were on top of the ground in the spring. The soil, however, was not very dry, and the winter had been wet and unusually changeable. Speaking of Lilies, the White Japan Lily, known as *Præcox*, is my choice of all the Japan Lilies. It is purely white, with occasionally the slightest blush of rose; which is scarcely perceptible. The leaves and stalks are a lighter green than other Japan Lilies.—T.

BULBS IN THE HOUSE.



DOUBLE HYACINTH.



SINGLE HYACINTH.

ROMAN HYACINTH.

In my last I promised, with permission, to give your readers some suggestions about growing bulbs in the house, and there is nothing in the horticultural way that is so easily and successfully done, even by the novice; nothing that will make a house so cheerful and tasteful and home-like as a few bulbs. They are beautiful when in bloom, and objects of interest from the time the first leaf appears above ground. There is change every day, new

leaves, new buds and blossoms. As a general rule amateurs succeed best in growing bulbs in pots of earth. Secure good soil from an old meadow or pasture lot, where grass has been grown for a long time—in some fence-corner, perhaps. This earth will be black, and somewhat sticky, and a little clean sand, say one-eighth, added to it, will make it light and porous, and will be as good a soil as can be. Those who look ahead far enough can get a



HYACINTHS FLOWERING IN GLASSES OF WATER, AND TULIPS IN POTS OF EARTH.

little pile of sod, which may be kept in one corner of the garden, and this will be rotted by the autumn and make excellent potting earth. No artificial manure or anything of the kind will be needed. Fill the pots about two-thirds with this earth, then place the bulbs on top and complete filling. If Hyacinths or Narcissus, the top of the bulbs should be about an inch below the surface. Shake the pot so as to pack the soil, water well, and place the pots in a cool cellar for several weeks. Tulips and Crocuses I put a little deeper.

As soon as there is a sign of growth, shown by green appearing on the surface, remove the pots to a cool, light room. Water thoroughly as soon as the soil appears to be getting dry, giving it a good wetting, and then the roots will go down; but if a little water is given every day it keeps the roots too near the surface, where they are obliged to stay to get a little drink, and, if watering should be neglected for a day or two, these roots near the surface will suffer.

Bulbs in the house usually suffer from heat and a dry atmosphere. This forces them to flower early, when the plants are small, hurries things along unnaturally, and, consequently, everything is imperfectly developed and short-lived. The thermometer should never be al-



HYACINTHS FLOWERING IN POTS.

lowed to get above seventy, and sixty, or sixty-five, would be much better; fifty is high enough for the night. If bulbs are placed in a hall or library—some place not much used—this temperature can usually be secured without inconvenience to the family. Fine days, a little air should be given to the room, and all the sunlight that can be had. A moist atmosphere is also desirable, and if a piece of oil-cloth is placed under the plants, so as to save the floor, something can be done to obtain this by syringing the plants and wetting this cloth.

The early Tulips are very desirable for pot-culture, from three to half a dozen in a pot, according to its size. The Duc Van Thols are the earliest. Crocuses are pretty, flower very early, but soon pass away. The varieties of Polyanthus Narcissus are not excelled by any flower for house culture, but I do not design to speak of the different bulbs suited for house-culture at this time. Perhaps I may do so before planting time.

Hyacinths and Narcissus both may be flowered in glasses of water, and in this way they bloom well and are truly handsome. When the bulbs are placed in the glasses, the water should just touch the bottom of the bulb. It will soon evaporate so that it is less than half an inch below, and should be kept at this distance by occasionally adding a little to the quantity. Set the glasses in a cool cellar until the roots nearly fill the glasses, and the tops start, and then treat them as recommended for pots.

Some of the double Hyacinths are not suited for house culture, so if you are not acquainted with the proper kinds, it is best to leave the selection with the dealer from whom you purchase the bulbs, stating for what purpose you wish them.

Hyacinths will not usually flower until February and March, except the little Roman White, which will generally bloom during the holidays. The spikes are small, and the flowers scattering, and its only merit is its earliness. It is much liked by florists for cutting, at a time when flowers are in demand.

After the flowers are gone, it is well to put the bulbs in the ground, where they can remain until they ripen. Bulbs that have flowered in water are not fit for house-culture again, but may be of service in the garden. Indeed, for house-culture it is best to obtain newly-imported Holland-grown bulbs.—AN OLD GARDENER.

THE MESQUIT BEAN.

MR. JAMES VICK:—Having had a somewhat unsatisfactory experience in connection with the Mesquit, or Mezquite Bean, *Prosopis pubescens*, also called the Screw Bean, I desire to ask whether any of the numerous readers of your journal can furnish any information with regard to this plant, and especially with regard to its properties as an article of fodder for horses and mules.

Some years ago, while reading the report of a survey made by Lieutenant WHIPPLE, U. S. A., of the territory lying between San Diego and the junction of the Gila and Colorado rivers, I was struck with the following remarks concerning this Bean: "This day we first met with the Mezquite Bean, upon which the pros-

perity of our horses and mules, and the success of our expedition are expected to depend. Both the screw and the pod contain much saccharine matter and are very nutritious." Lieutenant WHIPPLE repeatedly refers to the Bean as being of great service for the purposes of fodder. He describes the pods as being "screw-like in appearance, and growing in clusters of from eight to ten upon the same stem," and says "they ripen at different sizes, and are very abundant, each tree producing many bushels." Being at that time in communication with the Secretary of State for the Colonies upon kindred matters, I wrote to him concerning this Bean, pointing out what had been said in its favor by Lieutenant WHIPPLE, and suggesting its introduction into the colonies as an article of fodder. The Secretary of State, after referring the matter to Dr. HOOKER, Curator of the Royal Gardens, Kew, England, decided to obtain a supply of the seeds and distribute them among the various British colonies and dependencies. This was accordingly done, and I awaited with interest the result of the experiment. I was hardly prepared, however, for the information contained in a letter which I received some two years later, enclosing a copy of a communication from the Superintendent of the Botanical Gardens of Jamaica, to whom a quantity of the seeds had been forwarded. The Superintendent stated that as only a few of the seeds were in a fit state for germination he had fed a portion of the remainder, about one pound, to a fine, healthy horse; and that on the morning of the third day after partaking of them the horse was found dead in the stable, under such circumstances as to lead to the belief that it had died from belly-ache. The conclusion was accordingly come to, that the pods of the Bean were more or less noxious, and consequently unfit for fodder. On being made aware of these facts, I communicated with the United States Government as to the statements made by Lieutenant WHIPPLE in his report. This gentleman being dead, my letter was referred to General EMORY, who had assisted in the survey referred to, and who corroborated the remarks of Lieutenant WHIPPLE as to the properties of the plant, saying: "The Mezquite Bean is not injurious to animal life." I communicated General EMORY's letter to the English authorities, and the matter was then allowed to drop. It should, perhaps, be added that the Superintendent of the Jamaica Gardens made the somewhat peculiar statement that another species of the plant, *Prosopis julifera*, existed in that Island, the pods of which, "although a valuable fodder when eaten by horses, but especially after rains, are almost in-

variably the means of causing severe belly-ache, and very frequently death."

I was not at the time, nor am I yet, quite satisfied that the death of the horse was fairly attributable to the Beans, and in view of the conflicting testimony disclosed above, I should be glad if you, sir, or some of the readers of the MAGAZINE can throw any additional light on the matter.

COWPER rejects from the list of his friends the man who "would needlessly set foot upon a worm," and I do not want to have my conscience burdened with the unnecessary death of any animal, much less that of a "fine, healthy horse."—A. K., *Toronto, Ont.*

MY SNOW BALL.

The flowering shrubs are now in their glory, and I spend many pleasant hours among them. I don't know of anything more charming at this season of the year than a choice collection of choice shrubs. Among them all, however, I have nothing so grand as a large Snow Ball, which I planted twelve years ago. It is now nearly twelve feet in height, and more in di-



SNOW BALL.

ameter. I thought I would send you the number of flowers it is now bearing, but gave it up after counting until I grew tired. It is, however, one mass of snow balls, with just enough foliage peeping out to make one grand, mammoth bouquet.

To set out half a dozen shrubs seems a small thing, and, when the work is done, it seems little enough, but they grow when we work and sleep, and in five or six years we begin to see that our work was not little, nor in vain, for it has created a little realm of beauty, a lasting pleasure. I have, also, a very fine White Fringe, which is much admired when in blossom. Some of my neighbors have applied to several nurseries in vain for specimens to plant. —E. S.

POETICAL LEGENDS OF FLOWERS.

"Not a tree,
A plant, a leaf, a blossom, but contains
A folio volume. We may read, and read,
And read again, and still find something new ;
Something to please, and something to instruct."

There are few people indeed, who have not, at some period of their lives, taken an interest in flowers. And yet, but few of these have given a thought to the poetical legends connected with them.

This legendary origin of plants is extremely interesting. There is the Olive tree. It is said that Minerva and Neptune disputed as to which one should have the honor of naming Athens. The gods in council decreed that the one who conferred the greatest benefit upon mankind should have the reward. Neptune struck the shore with his trident, and up sprang a horse. Minerva created the Olive tree, and it was decided that peace, represented by the Olive, was of far greater benefit than war, of which the horse was the symbol.

Demophoon, son of Theseus, on his way home after the siege of Troy, was shipwrecked and cast upon the coast of Thrace, where he was most hospitably received by the Queen, Phyllis. He won her heart, and became her husband. But scarcely were they united when Demophoon received news of his father's death. On his departure he promised to return in a month. The month slipped away and he came not, and the forlorn Phyllis wandered day after day on the shore, looking for a sail. Worn out at last with grief, she expired, and the pitying gods turned her into an Almond tree. Soon afterward Demophoon returned, and on being told what had occurred, flew to the shore and threw his arms around the tree. Such was Phyllis' love, that the bare and leafless branches immediately burst forth into clusters of large and beautiful blossoms.

Of the Rose, one fable says: "Flora having found the dead body of one of her nymphs, whose beauty could only be equaled by her virtue, implored all the gods to assist her in changing it into a flower which all others should acknowledge to be their queen. Apollo lent the vivifying power of his beams, Cupid bathed it in nectar, Vertumnus gave its perfume, Pomona its fruit, and Flora herself its diadem of flowers." The Turks believed that the Rose sprang from perspiration of Mahomet, and for this reason they never trod upon a Rose leaf, or suffered one to lie upon the ground.

Ovid is a fruitful source for legends. The nymph Daphne was beloved by Apollo. In flying from him she prayed that the earth would either yawn and swallow her, or else, by changing, destroy the form which caused her to be

adored. Her prayer was answered, and the gods changed her into a Laurel tree. Then Apollo said: "But since thou canst not be my wife, at least thou shalt be my tree. Thou shalt be presented to the Latin chieftains, when the joyous voices of soldiers shall sound the song of triumph, and the long procession shall resort to the capital. Thou shalt stand as a most faithful guardian at the gate-post of Augustus, and shalt protect the Oak placed in the center; and as my head is ever youthful with unshorn locks, do thou, too, always wear the lasting honor of thy foliage."

The beautiful Narcissus had, according to one legend, a twin sister to whom he was tenderly attached. She died young, and Narcissus, deeply lamenting her death, would go to a neighboring fountain to gaze at his own image, because it so closely resembled the sister he had lost. When he died, he was changed into the flower which bears his name. Both the Crocus and Hyacinth were derived from youths, one of whom died because he had not been able to win the love of a nymph; the other having been killed by Apollo while playing with the discus.

Adonis, while hunting in the woods, was killed by a wild boar, and from the blood which sprinkled the ground, Venus caused a crimson flower to spring up.

These examples will serve to show the supposed origin of some plants by the ancients. Let us now turn to the origin of the poetical names given to plants by botanists. There is, for instance, Andromeda, so called by LINNÆUS, for reasons which we give in his own words. "As I contemplated it," said he, "I could not help thinking of Andromeda as described by the poets; and the more appropriate they seemed to the little plant before me, so that if these writers had had it in view, they could scarcely have contrived a more apposite fable. This plant is always fixed on some little turfey hillock in the midst of the swamps, as Andromeda herself was chained to a rock in the sea, which bathed her feet as the fresh water does the roots of the plant. Dragons and venomous serpents surrounded her, as toads and other reptiles frequent the abode of her vegetable prototype, and, when they pair in the spring, throw mud and water over its leaves and branches. As the distressed virgin cast down her face through excessive modesty, so does the rosy-colored flower hang its head, growing paler and paler as it withers away. At length comes Perseus in the shape of summer, dries up the surrounding waters and destroys the monsters."

Then there is Calypso, a pretty little Orchid,

named after the goddess who detained Ulysses after the siege of Troy. Then Circeæ, from the goddess who changed Ulysses' companions into swine.

The Forget-me-not has the following legend connected with it. A knight and his lady were walking on the banks of the Rhine, when the lady spied a pretty blue flower apparently floating down the stream. As she expressed a desire to possess it, her cavalier plunged into the stream, was carried off his feet, and, with a last expiring effort, flung the flower on the shore. As he sank he exclaimed, "Vergessen mich nicht," and to this hour the flower is called Forget-me-not. LONGFELLOW, in his "Evangeline," says

"Blossomed the lovely stars, the Forget-me-nots of angels."

All the poets from the earliest period have celebrated flowers in their verse, and they will continue to do so for all time to come. All lovers of flowers know that

"Your voiceless lips, O, flowers, are living preachers:
Each cup a pulpit, every leaf a book,
Supplying to my fancy numerous teachers,
From loneliest nook."

—J. F. J., *Cincinnati, O.*

MIGNONETTE.

The popular Mignonette is loved for its sweetness, and not for the beauty of its flowers. These, however, are delicate, and not uninteresting; indeed, they are as curiously and wonderfully made as any of the flowers of the garden. Florists and seedsmen have introduced several kinds claiming to have larger, brighter, and better flowers, but the im-



NEW SPIRAL.



PARSONS' NEW WHITE.

provement over the old kind has not been astonishing, and, I have no doubt, in some cases quite disappointing to the purchaser. One of my neighbors complained sadly at the slight improvement, and I rather think he expected flowers as large as a Hollyhock, instead of a large Mignonette. The New Spiral is of robust growth, but to me it is not better than the

old kind for cutting. It makes a better-looking plant in the garden. The best of all I have tried is Parsons' New White. It is as sweet as the old kind, while the flowers are whiter, having lost that greenish color which characterizes the old kind. This is my favorite, though I should be happy with only the old sort. Mignonette can be made to grow into a little shrub, by potting and pinching, and those who have time will find this work quite a pleasure. I had one plant in a pot that I kept growing more than a year.—STEELE.

TWO PLANTS IN ONE POT.

MR. VICK:—The most beautiful object, and one that attracts a great deal of attention, in my greenhouse, at present, is a Wax Plant, *Hoya carnosa*, and a red-blooming sword-leaf Cactus, growing together in one large pot. The



Wax Plant is trained on a square frame, three feet high, flared at the top. The outside of the frame is covered with the rich foliage of the Wax Plant, while the long blades of the Cactus grow up inside of the frame-work, and the large, red flowers push their way through the waxy foliage to the outside of the frame. After the Cactus is through blooming, the Wax Plant begins to bloom; so it is an object of beauty still, and well rewards any one for the little labor bestowed upon it. These two plants, requiring similar treatment, will flourish growing in the same pot.—R. A. S., *Hood's Landing, Tenn.*

COLLINSIA BICOLOR.

Among the many very pretty annuals of our gardens, the *Collinsia bicolor* is one that is well worthy of more extensive cultivation than it at present receives. Now, I desire to call the attention of the readers of the *MAGAZINE* to this very pretty and easily-cultivated plant, and hope that some of them will give it a trial and report the result. The *Collinsia bicolor* is a very handsome, free-flowering annual, with small and fibrous roots, growing erect, about twenty inches high, with lanceolate leaves. The pretty flowers are arranged in whorls near the extremities of the branches. The flowers appear large and striking, from the contrast between the upper and lower lip, the upper lip



COLLINSIA BICOLOR.

being white, and the lower lip of a dark blue, or purple. It flowers freely during the entire summer months.

The *Collinsia* is a native of California, whence it was introduced in 1839, by Mr. DAVID DOUGLAS. It belongs to the natural order, Scrophulariaceæ. It is a plant of easy cultivation, thriving in the greatest luxuriance in a bed prepared for it by digging and manuring. The plants should stand about eight inches apart where they are intended to bloom. The seed can be sown in heat, in March and April, or in a cold-frame in April, or in a well-prepared border in the open air in May. The plants should be transplanted into boxes, an inch apart, as soon as they are strong enough to handle, and every care should be taken that they do not become drawn. If sown in the open air, the plants should be removed to the place where they are to bloom, as soon as they are strong enough to handle. The seed can also be sown in the autumn, and, if the winter

is moderate, the plants will survive and flower early in the spring.

The genus was named by Dr. LINDLEY, in honor of Mr. ZACCHEUS COLLINS, of Philadelphia, a talented botanist and mineralogist. The specific name, *bicolor*, alludes to the two distinct colors in the flowers.—C. E. PARNELL.

THE WILD HYDRANGEA.

Mr. EDITOR:—There is nothing more pleasant to the lover of flowers and ornamental plants than a trip into the wild woods. Here, in West Tennessee, we have many beautiful trees and attractive flowers.

Much is said of *Hydrangea* in our catalogues, and the writer has had experience in growing, and often, in our blazing hot sun, failing to grow this interesting shrub. Some ten years ago, while on a visit to the country, a bush of peculiar foliage attracted my attention, and was immediately transferred from its shady grove to our grounds. It was slow to grow at first, but it has adapted itself fully to the new situation, and is now a thing of beauty and joy. Just at this time it is coming into bloom. The height is about eight feet, and the breadth about the same. It is a mass of white blooms, growing on trusses that reach a foot in length, and the leaf is a bright green, with the underside very light. It continues in bloom a long time, in fact, the flowers remain on the trusses, or spikes, till cold weather, changing to pink, and then to brown. The bark is also peculiar, having the quality of shelling off, something like the Birch, making the whole thing curious and attractive.—A. H. B., *Brownsville, Tenn.*

A specimen received of this plant shows it to be *Hydrangea quercifolia*.

VERBENAS SELF-SOWN.

My wife and myself have taken great interest raising flowers, and although we have had much to contend with, our garden having been a brick-yard, we have, by dint of hard work, succeeded in having the most attractive garden in the neighborhood, raising nearly all our plants from seed.

I do not see any mention in your *MAGAZINE* of *Verbenas* in the North from self-sown seed. Last year we succeeded, with a good deal of care, in raising seven plants from a paper of hybrid seed. They grew vigorously, and were a mass of bloom all summer until frost. I left the old plants on the bed all winter, and this spring was surprised to find hundreds of young plants from self-sown seed, even after the severe winter. They are strong and thrifty plants, and after supplying all our neighbors, we have more than enough for ourselves.—S. S., *Cincinnati, O.*



PLEASE GIVE ME A FLOWER.

Under this caption the *Gardener's Chronicle* thus refers to the love of nature inherited by those poor children in the dense cities, who know but little of its pleasures and freedom. "If any gentle reader wishes to gather experience of one of the brightest features of low life in London, or any large town, let him or her carry somewhat negligently, and without marked ostentation, through some of the back streets where the poor most do congregate, a handful of flowers. These become at once the signal for great excitement, the children playing in the streets evince a deep and anxious longing, and with one voice they cry in accents that must excite the pity of the most hardened, 'Please give me a flower!' In that singularly touching ballad of London child-life, 'Billy's Rose,' the author has portrayed an incident, fictional doubtless, but based on this deep and all-pervading love for flowers that exists among the very poorest. The poor dying boy had been the previous summer taken in some ragged school excursion into the country, and passing along a beautiful lane had seen such beautiful Roses growing in a garden. To have one of these flowers was his last dying wish, and his sister, a mere child also, even though it be winter and the roads deep in snow, sets out on the long journey, in the vain hope that she may find a Rose to bring back to the poor little boy she loves so well. Why do these poor people call for flowers? Is it to use them for a moment and then cast them aside with contemptuous indifference? Who thinks that?—surely no one. Shut out by poverty and the needs incidental to a town life from seeing and revelling in those delights which country children have in such abundance, they pant with eager hearts and deep, intense longing for any small evidence of the great and beautiful world of nature that lies beyond their streets, and to which they may seldom or never go. If we could fancy these children realizing in their little minds a conception of Paradise, surely it would be one of green fields, of beautiful flowers, of overhanging trees,

a place for enjoyment, fresh air, and eternal revelling. If some have too many flowers, let them soon take a basketful into our poorer streets, and thus realize the profound pleasure experienced in satisfying the children's longing for just one of these welcome gifts."

MOVING A LARGE TREE.

The following account, by the *Gardener's Chronicle*, of the removal of a large Purple Beech, is of interest. It occurred last October, at Maresfield Park, Sussex: "The tree, which weighed over fifty tons, was carried over a sunk fence from the garden in front of the mansion into the park, a distance of about two hundred yards. The height of the tree is over fifty feet, circumference of trunk nine feet eight inches, diameter of branches from north to south fifty-two feet six inches, and from east to west forty-six feet. The square mass of soil and roots removed was sixteen by sixteen feet, and three to four feet deep. The tree has withstood the winter gales with impunity, and the young growth, samples of which were enclosed, is quite satisfactory."

Some years ago we saw a tree about as large exhibited at a fair, in England, by the manufacturers of machinery for the removal of large trees. It remained on the grounds for a week, and was then replanted, and the papers stated that the tree grew and scarcely received any check from the treatment it had received.

ANTI-FEVER TREES.—The Blue Gum was hailed as a great blessing, that was to improve, at least, all malarious districts, and great was the disappointment when it was found that it needed a climate almost like the Orange. It is now being declared that the Willow is quite as useful for malaria districts as the Blue Gum, and even more so, and well deserving the name of the Anti-fever Tree. The malarious shores of the Levant, from which fevers and agues were never absent, have been rendered perfectly healthy by the extensive planting of Willow trees.

A ROSE SHADE.

What will our readers say about shading Roses in England? We have heard so much of the dull and dripping skies of England we can scarcely believe they have need of shade there for anything. Yet they have, and know how to use it properly. We have frequently called attention to the necessity of shade in our climate for the beautiful but fugitive blooms of the Tulip. The temperature of the soil has much to do with the early dropping of flowers, and mulching with new-mown grass, or something of the kind, will be found of advantage where shading may be considered impracticable. But here is what one English gardener says about rose-shades that he employs: "They possess the advantage of gently shading the bloom from the sun, and at the same time protecting it from rain, yet not in any way interfering with the free current of air (which is so health-giving to the Rose) from playing round it. Besides this, their cost is almost nothing, and half a dozen or so can be made in an hour. I turn a plate down on a piece of calico, rule a line around it with a pencil, as a guide to the scissors. Allow half an inch for the hem, turn down to mark, and sew all round. Cut a little notch in the hem, to slip one end of a piece of wire round the hem. The wire is best bent round in a circle the size of the plate previous to inserting it. As the end of the wire, after going round the hem, comes out at the notch at which it entered, push it right through seven or eight inches to allow for twisting around a stick. Hold with pincers both ends of the wire where they cross at the hole in hem, and bend both ends back, so as to pass them through a hole in the stick, and twist both ends of wire round the stick, one each way. Shape it a bit and the canvas will become as tight as a drum, and the job is done and will last for years."

OSMUNDAS.

A writer, W. BIRKENHEAD, in *The Garden*, says that "*Osmunda gracilis* is a lovely North American Fern, and answers in all respects to the British *O. regalis*, except that all the portions of the fronds are of a lighter character, the rachis and stipes being thinner, and the pinnules narrower and less solid than in *O. regalis*. *O. gracilis* grows from two feet to three feet high." Again he says, "*O. regalis*, as before said, differs from *O. gracilis* only in its stronger and more robust and rigid character. In suitable situations it grows to a large size, sometimes approaching five feet in height, and occasionally eight or ten feet."

Our botanists do not regard the differences between these two forms of *Osmundas* sufficient

to constitute separate species. We do not recognize *O. gracilis*, but consider our form to be *O. regalis*. The writer of the above quotation goes wide of the mark in restricting the height of the American plant to two or three feet. It is not uncommon to find fronds five feet high and over.

NEWTOWN PIPPINS IN SPRING.

The Garden notices Newtown Pippins in Covent Garden, London, and says that, contrary to expectation, they were "really a good flavor for this time of year." The writer proceeds to say the kind of Newtown Pippin he means is "the old spotted one, which people in the market say is by far the best." Whether this spot means really a variety or some mark of a local influence he does not know. "The fruit is dotted over with bold spots, almost looking like disease. Will any of our American friends tell us whence this comes?"

There is only one variety of Newtown Pippin, and the spots mentioned are fungoid. This variety of Apple in some soils is so subject to this disfigurement and injury as to make it unworthy of cultivation. They are to be preferred without the "spots."

LILY OF THE VALLEY IN PYRAMID.

At a recent horticultural exhibition fine groups of Lily of the Valley were shown. "A special feature of one group was some pyramidal specimens, between two and three feet high. These were formed by placing the roots thickly in pyramidal-shaped wicker-baskets filled with soil in such a manner that the points of the eyes protruded at the sides, so that when the foliage grew the whole would form a compact green mass, and this, interspersed copiously with spikes of blossoms, has an extremely pretty effect, and is particularly adapted for table or room decoration, as the plants continue a long time in perfection."

TOBACCO IN ITALY.—The Italian government has monopolized the trade in tobacco in that country, and it buys largely of Kentucky, Virginia, and Ohio growth. The celebrated "Cavour" cigars, constituting three-fourths of all used in Italy, are made from Kentucky leaf. At Milan are made the "straw cigars" from Virginia tobacco, and the "Havana cigars" are made from Ohio leaf. There are eight principal manufactories in the kingdom, which produce daily six million cigars. The consumer buys them at about a cent apiece.

GOLDEN-LEAVED CURRANTS.—They have in England a golden-leaved black Currant. It is said to be very attractive.



A NORTHERN SLOPE IN NEBRASKA.

MR. VICK:—Fortunately, I am one of those women who have time and strength, as well as taste, for gardening; but, alas! I labor under the disadvantage of having a northern slope—just such a slope as would make a beautiful lawn, if it only faced the south. When we commenced to improve our farm, five years ago, it was one broad tract of waving prairie grass. Hedges, groves, and orchards, of course, were of first importance, and one of the first steps taken was the setting out of a row of wild Gooseberry bushes, running east and west. Now, those same bushes are a continual annoyance, to me at least, ever since it was decided where our new house should stand. They are within thirty feet of our front door, and “John,” who cares nothing for ornamental plants, and takes not the slightest interest in gardening of any kind, persistently refuses to have them removed. They are loose, scraggy, forlorn-looking things, scarcely two of the same size. In summer, vines make the tops a bower of beauty for a time, but I am wholly at a loss what to do with the north side. Are there any plants or vines that would thrive on the shady side? or could you devise any plan by which this unsightly row could be made to look a little more ornamental? I omitted to add that a row of small Maple trees, standing sixteen feet apart in the row, are set six feet north of the bushes, so that in a few years there will be a dense shade there.

What shall I plant on a dry spot a few feet north of some Cottonwood trees? Nothing I have tried seems to thrive there.

A few yards from the house is a steep bank with a northern exposure, partly overshadowed by some large Elm trees. Wild Grape, Raspberry, Strawberry, Sumac, some woodland vines, weeds and grasses flourish there. Could wild flowers, such as Blue-bells, Sweet William, Cardinal Flower, Spring Beauty, and hardy Ferns be introduced successfully there? None of these grow wild here, and I have never seen anything in our narrow belts of timber that looks at all like a Fern. Lower down this bank, in the edge of the water, grows a water plant, with leaves resembling the Calla Lily. The flowers are pure white, borne on a long spike; each individual floret is about half as large as a wild May-apple blossom, which it resembles. Is this the Arrow-head plant mentioned in “Tom’s Aquarium?” Would it thrive treated as a Calla Lily? I find that many of our wild flowers can be domesticated, and some of them greatly improved by cultivation. I have raised some flowers every year since I have lived here, and have been very successful with some, especially Gladiolus. Last season I raised nine large, well-developed bulbs, besides the usual number of small bulblets, from a single bulb, which I thought something wonderful. Now, don’t destroy my delightful hallucination by saying this is nothing unusual. With some flowers, however, I have made inglorious failures. I have a weakness for all flowers, but my especial favorites are those

that bloom in clusters. Sweet Williams invariably refuse to bloom for me. They grow well the first season, the second make a still more luxuriant growth, but show no signs of bloom. The third spring plants are part of them dead, the rest very weak, and soon die. I have tried transplanting, and have used manure, sand, ashes, and leaf-mould to no purpose. I appealed to your *FLORAL GUIDE* for help, and received the consoling advice, to “treat like Carnation.” Carnations act precisely like Sweet Williams, with me. I have a large clump of old-fashioned Grass Pink, now five years old, that has never bloomed. These Pinks were raised from seed gathered from the self-same plants that my aged grandmother (now gone to her rest) used to love and cherish. Saponaria, and a few others, I cannot get to bloom. What is the matter? Is the soil too new, or do they require a clay soil? Surely it is not because the soil lacks richness, for Annual and Perennial Phlox, Zinnia, Balsam, Lilies, Balloon Vine, Oxalis, and many others, grow well and bloom profusely. Hyacinth Bean and Nasturtiums bear an abundance of flowers, but in no case have I been able to save any seed; in fact, a good many of my annuals do not go to seed. Is there any mode of treatment that will make them bear seed?

I have been much interested in the articles on hedging, published in your *MAGAZINE*. A correspondent in the *Farmer’s Review* speaks rather disparagingly of the Honey Locust as a hedge plant. I want a hedge, but do not like Osage very well. Some of the large Rose nurseries recommend Roses very highly for hedging yards and gardens, and offer them very cheap. We have no fences here, and would Roses make a fence that would be proof against pigs and chickens?

An English Ivy has not grown any since last summer. The leaves have not fallen, but look dull. Should it be cut back? The leaves of a Calla were killed by a frost early last winter, since then the old leaf dies as soon as a new one appears; it has been repotted once, and the bulb was sound. What shall I do with it?—MRS. G. J. S., *Western, Neb.*

Our correspondent has much to be grateful for, and apparently is so situated as to enable her to become a good amateur horticulturist. The northern slope must be made to do its best, and making it do well will show the skill of the cultivator. A northern slope, in a climate like Nebraska, subject to severe cold winter weather and bright suns, is more favorable to those trees and shrubs that are not iron-clad, as it is called, or those that will not stand perfectly the severest weather, than is a southern exposure, for the reason that the snows lie on the ground more constantly, and the changes of temperature are less sudden. On the same ac-

count plants advance less rapidly in the spring, and thereby are less liable to injury from late frosts. Thus there is a compensation for lateness and coldness of soil. Besides, cool soils are most favorable for many bulbous and herbaceous plants, Lilies, and the Lily family generally, doing best on a northern slope; so, also, Pansies, and many other plants, both annual and perennial. We think this location will prove valuable for Roses.

With "John" at his post, determined that the row of Gooseberries shall remain, we know of nothing better to suggest than to plant Clematis and Honeysuckles along the row, and allow them to clamber over and cover the bushes.

The steep bank described is a very favorable place for raising many native plants, and no better use can be made of it than as a home for the beautiful wildings that are usually neglected. Ferns would undoubtedly thrive well there.

The water plant mentioned is probably the Arrowhead, or Sagittaria, as surmised.

The nine Gladiolus bulbs raised from one was a splendid crop, probably seldom equaled.

We cannot give a satisfactory reason for the peculiar behavior of your Sweet Williams and Carnations. From the fact that the growth is luxuriant, it is evident the soil does not need manure. It would be well to make a bed for these plants by adding to the soil a considerable proportion of sand and some lime. Perhaps some of our readers in Illinois and Iowa may have had valuable experience in relation to this matter, a narration of which would make evident the course to be pursued in this case. Frequent complaints are made of Pæonies and Lilies refusing to bloom on rich prairie soils, although they grow with great vigor.

The refusal of some of the plants to bear seeds, as described, probably indicates too rich a soil.

As to hedges, Roses will not make a hedge in Nebraska. The Honey Locust will be found satisfactory, notwithstanding what may be said against it by newspaper correspondents, who probably may know as little about it as about many other things of which they are so prolific of opinions and so scantily supplied with facts. For a low hedge, the Berberry may be planted with confidence.

The Calla injured by the frost should be planted in the garden, where it will recover, if recovery is possible.

FUCHSIAS DROPPING THEIR BUDS.—A little superphosphate mixed with the soil for Fuchsias will prevent the buds dropping, as they often do from plants in the house in the spring.—

MRS. W. S.

THE BELLE DE CHOISY CHERRY.

MR. EDITOR:—If the general classification of Cherries is the best we can have, there is very little clew can be got from it of the nature and quality of the French Cherry I find classified in a little work on fruits published by JOHN J. THOMAS in 1846. I believe Mr. T. is personally known to you, but to me only by his book, which I consider a good local text book on the subject on which it treats, and, in a tabulated list of Cherries appended to the body of the work, he describes both the tree and the fruit above named, perhaps as well as its general character merits. But in the body of the work Cherry classification seems to me to need better division: "The cultivated varieties of the Cherry consist of two distinct classes of sorts; the first, comprising the Mazzards, Hearts, and Bigarreaus, is characterized usually by the tall, upright growth, and pyramidal form of the tree, by the large, vigorous, and straight young branches, and by a sweet or bitter, but not a sour taste. The second class, or round-fruited, including the Dukes, Morellos, and the common pie Cherry, has small, irregular, and thickly-growing branches, and a decidedly acid fruit," etc. Now, my objection to this classification is, some of my most scraggy-growing, dwarfy trees, bear fruit nearly hard enough to play marbles with, which varieties are classed and described as "tall, vigorous, upright growers, of pyramidal form," while the Belle de Choisy grown in good soil, with us, is of upright growth and good form, the fruit classing among the largest we grow, and in flavor being a most deliciously sweet nectar. Mr. T., in his table of varieties, well describes it as "very delicate," for it is a thin-skinned, semi-transparent, fair-fleshed beauty, in which its small seed is plainly visible in the light, as it hangs singly, or in pairs, upon the slender stalk amid the shiny-green foliage, a fruit to gladden the heart of any admirer of nature to look upon. While I acknowledge a "glittering generality" of classification, both of stock and fruit, I demand a more intellect-treating description for my beauties, and they to be found in more refined society. These defects of professing authorities lead the practitioner to reject such vagaries of division of his products.—SIGMA.

From our own standpoint we can but suggest the idea, now very generally accepted, that nature does not admit of sharp division lines in classification. The common cultivated fruits that have been produced by numberless crosses and intercrosses, it has been found almost impossible to bring into any sort of arrangement that might properly be called a system. We are happy to be able here to acknowledge the valuable aid that has been afforded to American pomology by the assiduous labor and skill of that eminent pomologist and horticulturist, JOHN J. THOMAS. The methodical arrangement Mr. THOMAS has given to the cultivated fruits of this country, in his excellent treatise, *The American Fruit Culturist*, is exceedingly admirable, and is as near scientific accuracy as we think will ever be reached by any author upon the same subject.

The character of the soil, the climate, the location, and many other varying circumstances, affect the growth of fruit trees and the appearance of the fruit. This is a fact so well-known that it seems superfluous to allude to it, but a full

reply apparently requires the elimination of this familiar fact. Our correspondent graciously admits that the fruit is well described by Mr. THOMAS, and the shaft of his criticism is aimed, not at that, but at the "glittering generality" of his classification, elsewhere designated as a vagary. The classification referred to is only intended as a guide to the description; by means of it an unknown fruit can be more readily traced and discovered. "Sigma" will do a good deed by preparing and publishing a more systematic and useful arrangement of fruits, such as he "demands," and he will receive therefor the grateful thanks of a multitude of horticulturists.

THE SHOOTING STAR.

MR. VICK :—I have a single plant of the Shooting Star, a very hardy perennial. The seeds have been saved regularly for some years, and sown every spring under all kinds of treatment, but will not germinate. Being a single plant, I have been delicate about trying to divide it, fearing results. I presume you know the plants well, but I send a sketch of the plant in bloom. Please advise me how best to increase it.—S. D. H., Milwaukee, Wis.

The Shooting Star, or, as more commonly known, American Cowslip, *Dodecatheon Media*, is a very beautiful and desirable spring-blooming plant. An engraving is feeble to do



justice to its beauty. The difficulty in raising it from seed, complained of by our correspondent, may be obviated by sowing the seeds as soon as ripe, as they lose their vitality very soon after maturity. On this account, the seed of this plant cannot be kept in stock by seedsmen. Plants may be transplanted either in the fall, or in the early spring. At the present time (June 11th) the plants have been in flower for three weeks, with a prospect of continuing at least a week or ten days longer. The flowers are borne on a scape, or stem that rises up fifteen or eighteen inches high from the middle of the rosette of radical leaves; at the summit of this scape the flowers droop from long, slender peduncles. At first the flowers are nearly white, but later are of a purplish, or lilac, tinge. This plant, on account of its beauty and distinct character, will always be an attractive one in the spring in the mixed herbaceous border.

A NEW SUBSCRIBER'S QUESTIONS.

MR. VICK :—I am a new subscriber to your valuable MAGAZINE. All I know about flower-culture is from experience, and you know that any one will make a great many mistakes, if not failures, where they have no guide whatever. Therefore, your GUIDE and MAGAZINE are perfect treasures to me, and with their valuable assistance I anticipate quite a success with my flower garden, which now has the name of being the prettiest in the neighborhood. But, as I have not seen anything in particular about the culture of Roses, I wish to ask you a few questions. I have about fifteen varieties, but do not know the names of many of them. I will begin with the Tea Rose. I have but one variety of it; the flowers are rather small, of a pale pink, or flesh-color, in clusters of three or four. It commences to send out new shoots with buds in February, and from the first of March until November it is almost continually in bloom. What I wish to know is, how to prevent mildew on Roses; it sometimes injures my Tea Rose considerably. How can I protect the plant from the ravages of insects? There are three or four different kinds which will, at times, destroy a great many buds. I have learned from your MAGAZINE that tobacco-smoke will destroy thrips, for which information I am very thankful, as I have been troubled a great deal with them. But there is an insect which is more destructive to Roses, and especially Rose buds, than any other which I have to contend with. It is not content with feasting on full-blown Roses, so, whenever it perceives a new bud forming, it punctures it with its long, sharp bill and, in the cavity, deposits its eggs, there being as many as fifty in one brood; the result is, the bud drops off without expanding. How long it takes these eggs to come to maturity, or hatch, I do not know, as I destroy every bud that I think contains an egg, to reduce, if possible, the number of pests. I learned only yesterday that Persian insect powder sifted on the buds will cause them to drop off instantly; it does not kill them, but it is so disagreeable to them that I don't think they will trouble buds that have been sprinkled with the powder. I placed one of the insects in a paper containing some of the powder, and in half an hour he was dead.

There is another insect, which I think is the curculio. The outer covering of its wings is green, with small, black spots. The Persian insect powder does not disturb it in the least, and it is equally as devastating on Roses and Dahlias as any pest in existence. It is also very destructive to vegetables, Beans and Melons especially. Wood-ashes will drive them off from vegetables, but one does not care to have Rose petals filled with ashes. Will you please advise what will destroy or drive them away?

Will carbolic acid injure flowers? If not, how strong should the solution be?

How should Tea Roses be pruned when grown in the open garden? Should shoots be allowed to grow up from the roots every year, or should they be cut off, and only one stalk allowed to grow, pruned to a head, like a small tree? That is the way I have pruned all my Roses, because they looked neater, and I thought they would bloom better, but it is probably an error.

I have a dark red Rose, commonly called Giant of Battles, which is greatly troubled with mildew. I have tried bluestone-water, but with no very satisfactory results. Can you recommend something better? Please give me all the information you can in regard to Rose culture in gardens. In this climate, Roses will bloom almost the entire winter in the open garden, requiring no protection whatever.

Can you tell me how to treat Oleander in order to bring the blossoms to perfection? I have one which has been planted four years. It is four and one-half feet high, has four limbs branching out about two feet from

the ground, and these four branches contain other smaller ones, making it a very beautiful tree, or shrub. It has had buds on it almost constantly for two years, but, when they seem about ready to open, they drop off, and others form in their places. The soil is sandy loam. I have tried watering, and withholding water, all with the same results.

What kind of soil suits *Tritoma*? I have a plant of it which does not bloom as profusely as I think it should. I wish to improve it if I can.—MRS. L. P., *San Louis Obispo, Cal.*

The mildew to which *Roses* are subject is a fungus. It develops itself on its host when the conditions are suitable; a sudden lowering of the temperature accompanied with moist winds appears to favor its production. But what is most noteworthy, is that some kinds of *Roses* are more subject to it than others; also, that plants of any variety in an unthrifty state are fit subjects for it. The greatest immunity that can be afforded is a high state of health and vigor, and this indicates good cultivation on rich soil. Some varieties are particularly subject to the mildew, and *Giant of Battles* is one that is most notorious in this respect; for this reason alone it is now nearly discarded from the collections of experienced *Rose-growers*. This *Rose* is far more vigorous when worked on a strong, thriftily-growing stock than it is on its own roots. It should, therefore, only be raised in this manner; but, in either way, it manifests a constitutional weakness that no art or cultivation can amend. There are other varieties of similar habit, and it is waste of time to raise them. But, aside from the sorts that are peculiarly liable to mildew, most other kinds are visited with it, to some extent, at unfavorable times. The ordinary remedy is to dust the foliage with flowers of sulphur, but this is only of partial benefit. The fumes of sulphur will certainly destroy the fungus, but in the open air it is impossible to make the application, and in the house it is a delicate operation, on account of the liability of injuring and destroying the leaves. How to use sulphur with efficacy for this purpose has long been a question, and has been the source of many fruitless experiments. In another column will be found an account of a recent foreign method of employing sulphur in connection with lime for the destruction of mildew.

Most of the insects that infest the *Rose* may be successfully combatted by syringing the leaves, both on the upper and under surfaces, with a solution of whale-oil soap, in the proportion of one pound of soap to one gallon of water. Another useful compound is kerosene oil mixed with an equal quantity of milk. Take one tablespoonful of the compound and stir it into a gallon of water, or in that proportion for a larger quantity, and apply with a

syringe. When either of the methods here mentioned is employed, the plants should be syringed with clear water a few hours after.

Carbolic acid must be used with great care for the destruction of insects, as it will destroy the plants when used too freely. A good way to use it is to make a soap-suds with soft-soap, and then add a few drops of the acid. It will be best to experiment on weeds before applying the liquid to valuable plants.

Roses bloom on the wood that has just completed its growth. Without laying down any definite rules, the fact above stated enables us to perceive that the general principle, to guide us in pruning *Roses*, is to cut so as to produce the greatest amount of vigorous, new wood. Of course, judgment and experience are necessary to produce the best results.

For the *Oleander* that drops its buds, we should give a little liquid manure occasionally after the buds are formed, and supply it freely with water.

The *Tritoma*, *T. uvaria*, is not at all particular about soil; it should thrive in any good garden.

AMPELOPSIS VEITCHII.

MR. VICK:—Your MAGAZINE is a welcome visitor, and we have derived from its pages much valuable information. I do not think that you have made special mention of that beautiful creeper, *Ampelopsis Veitchii*. Do you know of anything that will compare with it in its own department? Will you kindly speak a good word for it, and tell your readers the best manner of training and propagating it.—F. M. G., *Riverhead, L. I.*

At different times *Ampelopsis Veitchii* has been noticed in our pages, and its characteristics stated. There is no difficulty about training it, as it clings with tenacity to wood, brick, or stone. We regard it an admirable plant as a climber on brick or stone walls, and specially useful for clothing the bases of buildings. An engraving showing the plant used for this purpose was given on page 23 of the present volume.

HYACINTHS AFTER BLOOMING.

I would ask a little information in regard to the treatment of *Hyacinths*. I have bought double-flowering bulbs, and find after the first season that the bulb divides into smaller pieces and produces only one stem, with single flowers. Is that the nature of the bulb, or is it the want of proper treatment? Can they be kept of the size they are bought?—I. L., *New York City*.

Hyacinth bulbs are raised with a great deal of care, in Holland, and are usually sent out in their best condition for blooming. When this period is passed, they deteriorate rapidly, and there is no means known by which they can be kept up to their best standard. Satisfactory blooms can be had only by the annual purchase of good, sound, imported bulbs.

THE WEIGELA.

The two prettiest plants I have now in my garden are two Weigelas, one bearing rose-colored flowers, and the other white. I do not remember seeing either of these mentioned in the MAGAZINE, and so thought I would call the attention of your readers to these very beautiful shrubs. My plants are now five feet in height



and very bushy. I have had them four years. They have now been in flower two weeks or more, and the young people have cut so many branches, wreaths of flowers, that I have almost feared they would take the whole of my shrubs. They have done this, more or less, for two years, and I don't know that any evil has resulted. Perhaps it causes the bushes to thicken up, for they are very dense.—B.

DRACÆNA AND ARDISIA.

MR. VICK:—Although I have been a subscriber to your MAGAZINE for some time, I believe I have never seen an answer to the following two questions, which just now interest me, and which, if it is agreeable to you, I would be pleased if you would answer in an early number of your valued MAGAZINE:

1. How can amateurs propagate the *Dracæna*?
2. How can an amateur make the seeds of the *Ardisia* (the red berries) grow? I have tried a number of times, but never succeeded in getting them to successfully germinate.—J. R. R., *Philadelphia, Pa.*

Dracænas are easily increased from cuttings of the stems. Pieces about an inch long and having two or three joints can be inserted in a mixture of leaf-mold and sand, and given a covering of half an inch of clean sand. Give a good watering and place the pan or pot where temperature of 65° or 70° can be maintained. A gentle hot-bed is a good place for them. Shade a little from the sun, and in two or three weeks the eyes will break and young roots push out. When the plants show two or three

inches high, they may be potted off singly in small pots, in a good soil, composed mostly of leaf-mold, but with the addition of a little sand and loam. The cold-frame is as good a place as they can have during the summer, as a night temperature of 75° may be kept up there, and during the day they can be freely aired. Light shading will be necessary when the sun is brightest. As the plants increase in size, they should be shifted into larger-sized pots. In winter a temperature of 60° will be sufficient.

The seed of *Ardisia crenulata* has a hard covering, and it requires considerable time for it to germinate; but, by keeping it constantly moist, it will come after a time. It often germinates unevenly, some plants appearing long before others; patience and persistence are requisite in dealing with this seed.

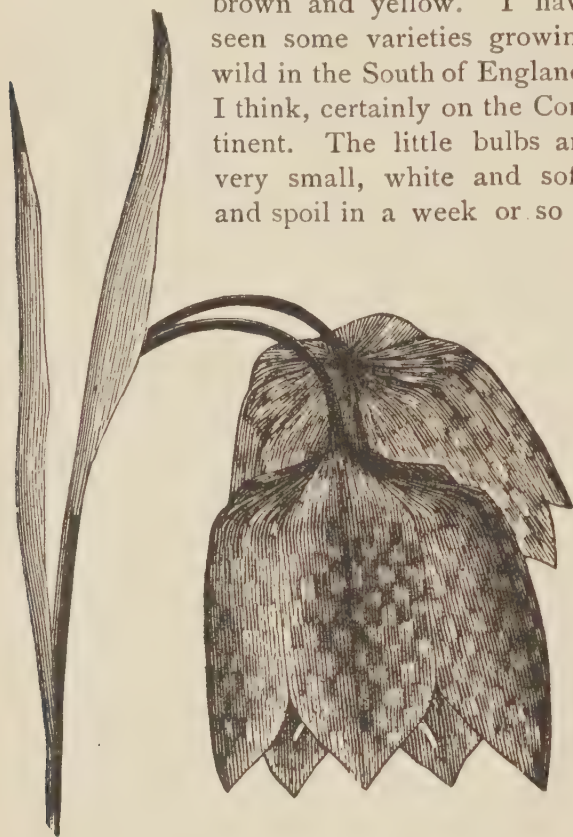
TREE BUTCHERING.

MR. EDITOR:—Among the proprietors of homesteads in this section of the country, there is raging what I shall term the mania of tree-butchering. I believe man has never been quite reconciled to the effects produced by natural law; and, therefore, it is not so much to be wondered at that he attempts an improvement, as it is strange that he so extensively misapprehends the nature he would change. Pictures of things are shadows, and not things substantially; to bring shadows to correspond to the substances they represent, requires a certain light to fall upon them at certain angles of direction, but the substance itself is its only true picture. Nature produces both the plant and the man, and if her laws were known there should be no conflict; everything that attains to perfection must find location and space in which to develop without conflict. If a tree has this, and in the direction of all its branches maintains the same, it seems reasonable that attempts at improvement would be mere misconception of natural law. If the effect to be produced by a tree be beauty in itself, this law should be complied with; but if the intended effect be to harmonize an aggregation of plants, that which would conflict in its several parts must be anticipated by the artist and the evil nipped in the bud. An art gardener should be wise not so much in his own conceit as in a sense of the laws of nature. To this kind of an artist, lopping off a tree where the stem or branch has attained the thickness of a man's arm or thigh, for instance, is very shocking to his senses, but to cut where the branch has attained the size of one's body, kills both the artist and the tree—as it should do! To use a homely phrase, "it makes my blood run cold." To catch a "butcher" up a tree that I conceive

to be a work of inimitable nature, armed with saw and pruning-ax, working for wages! And no one can pass many houses or farms in this locality, especially at the present time and stage of this raging disease, and not witness that these murderous deeds have been done—not to one here and there, but to scores and hundreds of trees and numerous homesteads.—SIGMA.

GUINEA-HEN FLOWER.

MR. EDITOR:—You have given us descriptions of many very useful and beautiful flowers, but I would like to introduce one that, perhaps, is not remarkable for either beauty or usefulness, but is both curious and interesting. I refer to the little Guinea-Hen Flower, *Fritillaria Meleagris*, sometimes called, also, Checkered Lily. I once had several varieties, differing only in color, being mostly tints of purple, or brown and yellow. I have seen some varieties growing wild in the South of England, I think, certainly on the Continent. The little bulbs are very small, white and soft, and spoil in a week or so if



kept out of the ground. The only way to preserve the bulbs, is to keep them in sandy earth, and even in that way they will not keep a great while. This is one reason, I presume, why our florists do not generally advertise them. If planted in the autumn, they flower, with me, about with the Hyacinth. The plant is delicate, the stems only six or eight inches in height, with one or more bell-shaped, drooping flowers. They look best if planted in groups. The name, *Fritillaria*, is from the Latin *fritillus*, a dice-box, from the general resemblance of the flower to an inverted dice-box, and *meleagris* means a Guinea hen.—AURORA.

CELERY.

From the first to the tenth of this month is the time to set Celery, at the north, for a late crop. A deep, mellow soil, highly enriched, is what is wanted. A plentiful supply of water will greatly increase the size and succulence of the plants. The dwarf kinds do not need trenches, but may be planted even with the surface, or in a shallow furrow made by a small plow. If manure is to be applied directly, the ground may be marked out by running the plow deep, twice in the furrow, turning it out each way; then scatter in the bottom a liberal quantity of old, fat dung, and cover it lightly with a small plow, leaving a shallow furrow when finished. Here set the plants, about five or six inches apart, pressing the soil firmly about them. We would not use fresh manure, but would prefer to depend on guano, or some good, artificial fertilizer, if old stable-manure has not been prepared for the purpose. Only enough earthing up will be necessary to keep the plants erect and shapely, and that should not be done previous to the middle of September. The tall varieties need more attention to earthing up, and should be planted deeper, but they are now but little grown on account of the extra labor connected with them. If Celery-raisers could command water, so as to run it freely along the lines of plants once a week, the result would be worth many times the trouble; in fact, it would be the most profitable operation that could be performed on the crop.

PLANT INQUIRIES.

What is the proper treatment of *Justicia*?

Are the hybrid *Chrysanthemums* the same that were grown in England thirty years ago?

Can I procure double blue and pink *Hepaticas*, and are they suitable to this country?—Mrs. W. S. *Glanworth, Ont.*

Ordinary greenhouse culture is proper for the *Justicias*; a temperature of 50° to 60° in winter, with water sparingly, is what is needed during the coldest weather. When the heat increases in spring and the growth advances, allow more water.

The *Chrysanthemums* now in cultivation are the same, with such improvements in varieties as may have taken place in the meantime. The Japanese *Chrysanthemums* have been introduced since the period mentioned.

The double *Hepaticas*, or, more properly, *Anemones*, of different colors, can be raised here, and are beautiful little plants, but there is no particular demand for them in this country. Seedsmen, when importing bulbs from Holland, can obtain them for you, if ordered soon. The double blue cost \$1 each, and the red 25 cents.

FRAXINELLA.

The "Little Ash," as its name implies, is a handsome, erect, little plant, a miniature shrub in appearance. Its leaves are pinnate, like the Ash tree, and of a bright, glossy green. This plant was formerly known as *Dictamnus Fraxinella*, but more recently is called *D. albus*. There is a variety of it, *D. albus*, var. *rubra*, with lilac-colored petals, veined with darker maroon, or purple, otherwise it is the same as *D. albus*. The latter has pure white flowers,



FRAXINELLA, PLANT AND FLOWER.

borne in an erect panicle. The flowers are peculiar in form, and quite handsome. The plant blooms here the last of May and early in June, and is a valuable herbaceous perennial. This plant has a marked peculiarity in secreting on nearly all parts of it a volatile oil of an agreeable, aromatic odor. The quantity of the oil is so great that a lighted match held to the stem will cause it to inflame instantaneously. This little pyrotechnic display does no injury. The plant is raised from seed sown as soon as ripe, otherwise they fail to germinate.

A GARDEN THREE YEARS UNTILLED.

The following account of a garden in Texas, that has been allowed to run wild for years, shows what a habit some plants have of making themselves at home, when they find a congenial spot. We allow our correspondent to tell her own story: "Although this is written in haste, I must tell you of something which has surprised and delighted us very much. We have just returned to our country place after an absence of three years, and though all outlines of the flower beds are gone, we find scattered about the grounds numerous young plants of *Perilla Nankinensis*, *Ricinus sanguineus*, *Amaranthus*, *Petunias*, and great masses of *Canna*, also, huge clumps of crimson *Hollyhock*; *Madeira Vine*, too, has survived, unprotected and uncared for in any way, the extremes of heat and cold. There are now vines of it on

the trellis some twelve feet long, with leaves four inches wide and four and a half inches long. This last winter has been the severest that I have known in Texas. I failed to mention *Datura*, some plants of which are now eighteen inches high—from the old roots. There are seedlings enough of it to furnish a nursery.

"I must tell you of some plants that I had last summer, Dahlias and Lantanas. I was told repeatedly that I would not succeed with Dahlias, because of the extreme heat; but I determined to try, and I doubt much if you ever had finer. I had three plants. The dwarf, a crimson tipped with white, was in bud the last of May, and gave the largest flowers I ever saw until heavy frosts. The Little Snowball, and a yellow tipped with scarlet, began to bloom a little later, but were covered with a mass of bloom from the middle of June until frost. They suffered no more from heat than the hardiest

plants I had. I cut the flowers as soon as they began to fade and buried them about the roots, and, the flowers being very profuse, this made a pretty good mulching. The Lantana I mention because it is so admirably adapted to our long, dry summers, and as this perhaps is not generally known, I hope you will, for the benefit of your Texas customers, make some mention of it in your MAGAZINE. I had four plants of Lantana last summer, *Lina Entiger*, *Marcella*, *Pluie d'Or*, and *Schlegelii*, which made a remarkable growth and show under very adverse circumstances. There was not a day that they were not aglow with their rainbow tints, while the wood grew into innumerable branches three and four feet long.

"I give my flowers a good deal of attention, and generally succeed to my own satisfaction and the admiration of my friends, but I have utterly failed so far with *Heliotrope*. Last year I tried, successively, as many as six. All left me, save one, which, after long and careful nursing, made a luxuriant growth, but only one cluster of flowers, late in August. Elated at this degree of success, and happy in the thought that it would add to the coming winter its sweetest breath, I potted it, sparing no pains, but before it was housed a rude wind swept by, and it drooped and soon withered away. I almost resolved never to try it again, but the springtime brings new resolves, and I wish to try once more, and now come to you for help.

Can you make a suggestion that will help me, and indeed many others, for I am not alone in this sad experience. What soil and situation suit it best? In Tennessee I grew it without an effort.

"Another question. Is there any known exterminator of the little black flea which destroys Sweet Alyssum?"

"I would love to tell you something of what your MAGAZINE has been to me, but time forbids now."

We can give no positive instructions in regard to raising the Heliotrope in the open ground in Texas, and would ask those of our readers in that State who have successfully raised it there in that manner, to give, in our columns, their experience with it. We suggest, as an experiment, that the young plants, as soon as set out, be mulched with grass, moss, or leaves of some kind, in order to keep the soil as cool as possible, and to maintain a uniform moisture. Let the watering be attended to carefully, but not supplying more than is actually needed.

The "little black flea" complained of is usually kept at bay by sprinkling wood ashes or pulverized quick-lime over the foliage, dusting the under sides of the leaves as much as possible, as well as the upper surfaces. The treatment is merely defensive; the insects cannot be exterminated, as they exist universally, having a home on all cruciferous plants. Late in the season, when the heat begins to decline, and the nights are cool, they almost cease their predatory operations.

A COS LETTUCE.

Very few American people appreciate and really enjoy a good Lettuce. What is seen in our markets is usually green, tough, and wilted. A really good Lettuce, to my notion, should be white, blanched, and either tender and buttery,



or crisp, so that it will break off short when bent. The most refreshing are the Cos varieties, of which there are quite a number. They grow erect, are somewhat conical in their form, with long, narrow leaves, and, if

well grown, when the outside leaves are taken off the head is found to be well blanched, and as tender and crisp as can be desired. They will also bear more heat than the Cabbage or Curled sorts, and, therefore, are of great value for warm climates.—G. C. T.

CROWN IMPERIAL.

Of all the early spring flowers there is nothing so majestic, really so imperial, as the one rightly named Crown Imperial. As soon as frost is gone, its glossy bright-green leaves appear, and before you are really aware of it, a beautiful column arises, almost as if by magic, two feet or more in height, and is soon surmounted with a crown of bell-shaped flowers and a cluster of narrow, green leaves, which my little Nellie calls a top-knot. A clump of these plants, with their emerald leaves and bright-red flowers, is really a thing of beauty. The Crown Imperial is so hardy that it never suffers in the severest winters, and, when once established, increases until, in a few years, where a single bulb was planted we have a clump, sending up many flowering stems.—VERNAL.



THE ROSE MILDEW.

A recent number of the *Journal des Roses* contains an account of two mixtures said to be successful in the destruction of Rose mildew. The first is to take flowers of sulphur to the amount of about seventeen and a half ounces avoirdupois, and the same amount of lime, and boil them for about ten minutes in about eleven pints of water, stirring the mixture frequently. After boiling, the solution is allowed to settle, and is then put into well-corked bottles. When used, about a quart of it is stirred into twenty-four gallons of water and applied to the plants with a syringe.

The other application, by means of a syringe, the same as the other, consists of about two drachms of sea-salt dissolved in nine quarts of water.

A CORRECTION.—An error and an omission in a quotation, by a correspondent, of some lines from HORACE SMITH'S "Hymn to the Flowers," occurred in our last issue, on page 181. The rhythm of the verse is destroyed without, however, impairing very much the sense. Correction should have been made before insertion, but it was overlooked. The whole poem, in correct form, may be found on page 34 of our first volume.

THE DICENTRA.

There are a great many very handsome plants, and some of them are scarce and expensive, and difficult to remove, or particular about soil, and difficult to manage. Others seem to do very well for a year or two, and then get smaller and poorer until they finally disappear. This has been my experience with the Auratum Lily for a number of years, but, fortunately, I succeeded in getting one to hold fast, to my great joy. There are other plants that are equally beautiful that seem to thrive, if they only have a decent chance, and increase from year to year, getting larger and better all



the time. This is the case with the Candidum, or common White Lily, which forms a clump or mass in a few years, throwing up several flower stems pure and beautiful.

The plant I wished to speak of and recommend to all your readers is the *Dicentra spectabilis*, or Bleeding Heart. Six years since I obtained a small root, and without any care except, of course, keeping the soil mellow and clean, it has spread in every direction, until I have a mammoth clump, and I have no plant in my garden handsomer than this when in flower. So attractive is it that my neighbors have insisted on my sharing with them, and, in half a dozen gardens the children of my plant may be seen. The pink hearts, hanging on graceful bending branches, are truly beautiful, while the leaves are handsome both in form and color.—B. W.

NAMING PLANTS.

A lady in Louisiana sent us some time since some seeds of what was described as “a very strange flower,” and wrote, “my daughter found it growing wild by a marshy place; she got the root. It dies down in winter and comes up again in spring, and is like a vine, but has no tendrils. The flowers are bell-shaped, and very pretty and graceful, of a lilac-color, with white veins, and as thick as a Hyacinth. It has no fragrance, but the leaves are very delicate. It is not common here, only one other plant in the county being known.” Later, a flower and leaf was sent, with remarks as follows: “I know you will be delighted with it. I have named it Alice Carey Cobœa, thinking it belongs to the Cobœa species of climbers; if not you can classify it. My daughter’s name is Alice Cary, and she is named for the poetess, Alice Cary, who was a cousin of mine. So, I wanted to name the flower for Alice.”

Really, it is too bad, but we are obliged to say that the plant is not a Cobœa, but a Clematis, *C. crispa*. Clematis crispa is a very interesting plant and, as we understand, not common in any part of the country. It is well worthy of cultivation. The same letter contains the following: “Spanish Moss is a parasite, but it will grow in the ground. I put some of it on a flower pot, and to make it stay on the side, I tack it down into the earth in the pot, and was astonished to see it looking green and fresh this spring after being around the pot all winter.” We have seen it grow while lying on the floor of our store-room.

WHITE WORMS IN POTS.

The correspondence published on page 180 of the last number, in relation to the destruction of white worms in pots of plants, has brought a statement from the party who lost the plants by the use of matches, that “the matches were not fired, ‘but used as they come.’” The original statement of losses must, therefore, stand as fact, and, as such, will very properly deter others from adopting the practice, unless some rational explanation of the effect of the matches in this case can be given, or, at least, it be proven that the case is an exceptional one.

A SCHOOL GARDEN.—A correspondent, at St. Louis, writes that her “sister, Miss —, who teaches a private school, has instituted a novel branch of horticulture. She allows her pupils to have, each, a little patch of ground in her school yard, and to cultivate, according to your printed directions, their choice of flowers, for which the children spend their pocket-money. The results have been successful.”

HYDRANGÆA HORTENSIS.

This is a common flower, truly, but not too common. It might well be more so, for it is useful in the house and the garden; in fact, everywhere. It must be almost hardy, for I have seen plants flourish in gardens not far south, where they have pretty cold weather sometimes in the winter. With us at the north they need house-culture, or rather, housing in the winter. I have a light cellar where plants winter nicely,



HYDRANGÆA HORTENSIS.

and in the spring their great heads of flowers pay for a good deal more trouble than they cost me. Last Sunday was called children's day, and some of the churches were decorated with flowers, but the most conspicuous of all, and the most useful of all, was the Hydrangea. In one place I noticed two very large plants, one on each side of the pulpit, with many flowers. They were truly magnificent. My first plants I obtained in the fall and kept them growing all winter, and the next summer I had full-sized specimens. Like a good many other nice things we have, this came from China nearly a hundred years ago.—C. F.

MANURES AND INSECTS.

MR. VICK:—Some of us who live in the city find it very hard to get good manure, and even when we can get it, it is too fresh to use, and there is no place to keep it that it may improve with age. Therefore, I take the liberty of asking you to tell us, through the MAGAZINE, whether bone-meal can be used instead, and, if so, in what proportion for pot-plants. Also, how much would be safe to use in the garden, say to a square yard of earth, and how much wood-ashes could one use for the same purpose in the garden.

I am very much troubled with a small, black fly which seems to be hatched from a white egg on top of the dirt in some pots. I think it injures the plants very much. I have tried saltpetre, lime-water, soot, and sulphur, and still they thrive. What can I do? I tried the matches for little worms in a pot of Stephanotis, with a light sprinkling of wood-ashes. I have seen no worms since in that pot.

I have seen several complaints in regard to the yellow

Jessamine. If those who are troubled will keep the plants steadily moist, and never allow them to receive the direct rays of the sun, I think they will be pleased with the result. It is a slow-grower, but blossoms well, and is fragrant as the Orange. I have had one two years.—MRS. V. H. J., *Providence, R. I.*

Bone-meal, guano, and some of the brands of superphosphates may be used with advantage in small city gardens, and for house-plants. From one to two ounces to a square yard of earth may be used of either of these substances. A very slight quantity will be enough for a plant in pot.

In this department, this month, may be found descriptions of several compounds for the destruction of insects, some of which would, probably, be effectual in the present case.

LILY OF THE VALLEY—LILIES.

MR. JAMES VICK:—Will you be kind enough to tell me, through the medium of your valuable MAGAZINE, something about the Lily of the Valley. I transplanted some from my garden to the cemetery, but they yield almost "nothing but leaves." If I should procure, in the fall, some of the flowering pips would they be apt to flower more than one year, or, as they increase, will leaves and no flowers result? The little Lily of the Valley is a favorite flower of mine, and I particularly desire them for the cemetery.

Is the *Lilium speciosum præcox* desirable for cemetery planting? I do not, somehow, succeed with the longiflorum.—SUBSCRIBER.

The Lily of the Valley blooms more freely in three or four years after planting than at first, and especially if in rich soil. It appears to be necessary to exhaust the soil to some extent before much bloom is produced.

Lilium speciosum album (*præcox*) is a beautiful variety and excellent as a cemetery plant; still, we cannot say that you would probably be more or less successful with it than with *L. longiflorum*.

PLANT FOR NAME.

MR. VICK:—Enclosed find some leaves of a plant, or shrub, that grows in this part of Texas. I do not know its name, but would like to very much. It is a soft-wooded plant, about two feet high, growing on the mesquite sandy loam. The stems are velvety, like the leaf, and late in the summer the leaves are bright red. I have never seen any blooms on it. The leaves enclosed are discolored a little in pressing.—MRS. W. L. R., *Trinity Mills, Tex.*

From specimen leaflets received, we think the plant referred to by our correspondent is *Rhus pumila*, and if so, it is poisonous to many persons, and should be handled with caution.

AN ORANGE INCLOSING ANOTHER.—A friend sends us a little Orange, about half an inch in diameter, "that was found inside of an ordinary Messina Orange. The pulp surrounding this little Orange was of usual flavor and appearance." This is quite an unusual monstrosity.



BEAUTY OF COMMON THINGS.

Helen and Mabel Grey were on a visit to Grandma Grey's. Aunt Milly was an invalid and had not walked a step for years. The girls thought her the loveliest person they had ever known, and her room the prettiest and cheeriest one in the house; the parlors, they thought, were not half so beautiful. There were vines festooning the windows and walls, and friends were always sending in cut flowers and pot-plants just in bloom, which were removed as soon as they lost their freshness, and replaced by others. The summer previous, a friend before closing her house for the season, had sent a grand painting of Arctic scenery, as a loan, she said, "to keep Miss Grey cool during the dog-days." There was an ice-bound ship and great, looming icebergs near by, with fields of ice stretching between and beyond, and a monstrous polar bear on his haunches, hungrily contemplating some shaggy-coated men with sledges in the distance. Aunt Milly declared that it refreshed her to study this picture when oppressed with heat, and she thought that it would really make her shiver to gaze at it in winter. But as cold weather had approached it suddenly disappeared and a warm, glowing picture of luscious summer had taken its place.

From these delicate attentions it may easily be inferred that Miss Grey was always so patient and bright that everybody loved her. The children of the vicinity thought it a great treat to be allowed occasionally to call on her, and were sure to hear some pleasant story told or read, with something about it that somehow they could never forget.

There was a time when, even on Sundays, a few boys and girls were permitted to gather in her room for instruction. Reclining on her couch, or sitting propped up by great pillows, the crimson covers of which she had herself crocheted and ornamented with fringe and gold-colored medallions, she would take a bud, or blossom, or chrysalis, and teach them most beautiful lessons of life, death, the resurrection and immortality; lessons more charming than

ordinary Sunday School teaching, because her illustrations were all drawn from nature, in imitation, perhaps, of similar ones that Christ sometimes used, such as the fig-tree, the vine, the lily of the field, the wheat and the tares, the grain of mustard seed, and others.

Helen and Mabel found so much to admire and love in Aunt Milly that they felt they must do something very nice for her before they left for home. But what that "something nice" should be was more than they could decide upon. Aunt Milly seemed to have everything done for her already. They talked of it in their room at night, and again the first thing in the morning. At last in their perplexity they went to Mrs. Grey.

"Grandma, dear," said Helen, "can you keep a secret if we take you into partnership?"

"Try me and see," was the answer.

"But Grandma, dear," said Mabel, "we are very earnest about this, and you won't trifle with us I'm sure. You see we love Aunt Milly so dearly that we want to surprise her with something that will please her very much. But others have thought of everything nice, and we can't think of anything new that we can do our own two selves."

Mrs. Grey thought it was very sweet of them to feel thus, but for some minutes was puzzled herself to make a suggestion. Finally she remarked that one morning since the coming of spring Aunt Milly had said that since the foliage and grasses had come she felt almost surfeited with flowers, and ——

Helen sprang, and placing her hand on Mrs. Grey's mouth, exclaimed, "Not another word, please! we want to think it up ourselves, and now you've given us the hint we'll manage the rest. Then, dancing Mabel out of the room, there followed a series of alternate suggestions and approvals, until finally two pairs of feet hastily mounted two flights of stairs to the garret, where a mammoth tray of the olden time was procured and taken to the back yard, whose corners and hidden spaces behind shrubberies, and the neglected nooks in the ample

garden, would afford the material most difficult to procure in making up the surprise offering for Aunt Milly.

They began at once, by first covering the tray with the flat sprays of *Arbor vitæ*, and so arranged it that the overhanging tips completely fringed the edges. Then they cut a small branch with its tendrils from a Grapevine, another with its pendant clusters of embryo fruit from a Currant bush, one from a Gooseberry shrub, and a twig from a Cherry tree which had both blossoms and incipient fruit. Then an early Apple tree, a Pear, a Plum, and a Peach were made to contribute each a twig; and all these they piled across one end of the tray. Then, with a small spade, they blocked out a brick-shaped piece of sod thickly set with short grass, and shaved it smoothly on the under side. Then they found a clump of White Clover and a Dandelion, each seeming to claim possession of the same bit of earth. These they lifted entire in a little square, and then placed the two plats across the middle of the tray. Then they stopped a moment to exchange opinions.

"Only to think!" said Helen, "it's more than four years since Aunt Milly has seen anything of this kind. I suppose no one has ever thought to carry her a sprig of anything common."

"And now that I think of it," said Mabel, "it seems to me that it must be like having to live altogether on dainties and sweetmeats, until one would almost famish for plain bread and potatoes. Don't you think that she'll care more for that one Dandelion blossom than for the Cherry and Apple blooms?"

"I shouldn't wonder; we'll see. Now let us fill up this end of the tray with the poor things that are always banished from floral society."

So then they gathered specimens of all the tabooed plants they could find. There were tufts of Red Clover and Sorrel, cuttings of May-weed, Wire-grass, Rag-weed, Mustard, Smart-weed, Pig-weed, and a large velvety leaf of Mullein. They also carefully cut a bit of Thistle and Nettle, but afterwards discarded them, saying they were "too ill-natured to be allowed in quiet company." These were then placed on the vacant end of the tray, which was now quite filled and ready for presentation. The freshness which marks the recent growth of vegetation made each leaf perfect and beautiful in itself, no matter what its name. Each lifting an end of the tray, the girls carried it to the dining-room, and then went to Miss Grey's room to arrange for its reception. As they placed an adjustable table near her couch and

lowered the top to suit her position, she looked at them curiously and remarked,

"I breakfasted so late, my dears, I expect it's rather soon for my dinner now."

Helen, who happened to be nearest, just kissed her for an answer, and then she and Mabel passed out and, with a signal to grandma to be witness, they carried in the singular offering and set it on the stand.

Without uttering a word, Miss Grey cast a long, searching glance over the whole, and then slipping the fingers of one hand among the blades of grass on the bit of turf, it rested there, while with the other she silently pressed a handkerchief to her overflowing eyes. Mrs. Grey and the girls softly left the room, and as the latter looked inquiringly at their grandma, she whispered—

"You could have done nothing that would have touched her like that. You see, she had grown hungry for the every-day-things of her young and happy, and healthful life."

Directly Miss Grey called to the girls, and as they entered, she only said, "My darlings!" and then asking for a large napkin to spread over her lap, she lifted the sod of Dandelion and Clover and pressed it to her lips.

"Auntie," said Helen, "do you like the Dandelion better than these?" pointing to the Cherry and Apple blooms.

"I like all of them, but it is a different liking for each. This golden blossom takes me back to golden days, and almost makes me a child again, sitting in the grass and clover with my apron full of yellow flowers. It will take me all day to go over these treasures, one by one—none shall be slighted, not even the Pig-weed. Now lay this down—there; now take up that bit of turf and turn it grass-side down on my two hands—so. O, how delightful is the odor of the fresh earth! Why, girls, this piece of sod is a feast for three of my senses! The grass is cool and refreshing to the touch, and every blade is beautiful in color and form to the sight, and the rich, brown soil is precious to the smell. I am reminded of the words—

'There's not of grass a single blade,
Nor leaf of lowliest mein,
Where heavenly skill is not displayed,
And heavenly wisdom seen.'

I expect that I shall dream to-night that I am pulling May weed blossoms by the road-side, and blowing the feathery seeds of the Dandelion to make them sail over my head, or making curls of their long, hollow stems to decorate my hair. I am very glad, my dears, that you thought of just this thing to do. It will refresh me for days to come. Now lay this down, please, and give me that branch of Currants.

O, how lovely; how perfect everything is! Now you may go out and amuse yourselves as you choose. I have royal company for the rest of the day, and thank you; thank you, my dears, for this very thing you have done. I was very hungry for the outside world."

Then Helen and Mabel went out and hugged each other for very joy that they had thought of something to do that had given real pleasure to Aunt Milly—something that no one else had thought of.—AUNT MARJORIE.

THE LABURNUM.

MR. VICK:—Several years ago my father obtained and I planted a Laburnum tree. It was bought for me because I had seen some very handsome ones near New York City. The first winter the top killed down with the frost, and I feared I had lost my Golden Chain, as this tree is commonly called, and that the Michigan climate was too cold for it, but it made several shoots near the ground. The next winter it froze back again, but not so badly



as the first winter, and many new shoots came out in the spring. For two or three winters it has not frozen back a bit, I believe; surely not enough to do harm, and now, instead of having a tree, I have a bush about as large round as it is in height. It is now almost covered with golden chains, and I measured some of them that were nine inches in length. It is the handsomest thing we have in our garden. Why did it freeze at first and then stop?—W.

[The Laburnum is a little tender for the Northern States, but, like many other things a little tender when first planted, becomes acclimated after a while. If the Laburnum is planted in a rich soil and makes a strong, late growth, the

tops of the branches are more apt to be injured than when the growth is slower and the wood is well ripened.]

A CANADIAN LETTER.

EDITOR VICK:—When I determined, about a year ago, to subscribe for your MAGAZINE, the old folks laughed at my foolishness in subscribing for another paper, when more came to the house already than I could possibly find time to read. Now, however, I often have chance to remind them that I am not the only one in the house who is "foolish" enough to read "Vick." By a judicious loan of several numbers, I succeeded in obtaining for you an extra subscriber, and I think you will soon have more from this district. This may seem rather slow work to you, but we are not such slow people, after all. Five or six years ago, floral culture in the neighborhood was confined to a very few of the more well-to-do folks, who were fairly successful; but now hardly a place in town, from the handsomest residence to the Poleman's shanty (the immigrants from Poland are here called Polemen), but makes an effort to have a floral display in the garden or in the house. Most of these efforts result creditably, and, consequently, a fast increasing interest is being taken in such matters here. The writer is conceited enough to think that this increased interest may be attributed, to a great extent, to the fine display in his garden, made by the plants grown from VICK'S seeds. The last two floral exhibitions in connection with our County Agricultural Society's fair brought out an exceedingly fine display, and considerable competition among the amateurs.

Last fall I obtained some bulbs. Of these, the Hyacinths were beautiful, and the Tulips and Crocuses very fair, but the Snow-drops and Oxalis did not amount to much. The Snow-drops grew all right, and the flower-buds appeared, but they did not open. What was the matter? Some of them were in the same box with the Hyacinths that did so well, and others were in a bowl.

The Oxalis, for baskets, received the same treatment as the other bulbs, only there was a little more sand given them, but the stems thrown up were very weak, have hardly grown since, and they have not flowered at all.—W. E. S., *Renfrew, Ont.*

[We give this in our Youth's Department, although we don't know that our correspondent is very young, though the "old folks" did laugh. The Oxalis versicolor, which our correspondent obtained, should flower early in the autumn, say October. Keep the soil dry and the tops will die down, and replant the

little bulbs in August. This variety will never flower well unless it can have sunshine, as the buds will not open satisfactorily. The other *Oxalis*, *lutea*, flowers in the latter part of winter, about March, and is a good variety for the house. Your bulbs are no doubt safe, and we hope will do well the next season. The little *Snow-drop* does not like a hot, dry room. Perhaps this was the reason it acted so badly.]

HONEY BELL.

Any of our young friends who have not tried a plant of the Honey Bell, or *Mahernia odorata*, may find it a charming little pet. The foliage is delicate and finely cut, the plant becomes a foot or two in height, branches freely, and bears a great profusion of little, nodding



yellow flowers of the sweetest perfume. It is almost continually in bloom, and is an excellent plant for the window in winter. It is of the easiest culture, either in the greenhouse or window-garden, in a light and moderately rich soil.

The name of this plant is an evidence of the difficulty botanists sometimes meet with in naming a newly-discovered plant. A genus of plants to which this one is very closely related had been named *Hermannia*, after a noted German botanist, and for this later-found genus the name *Hermannia* was transposed into *Mahernia*, thus still honoring Herr Hermann while indicating botanical relationship.

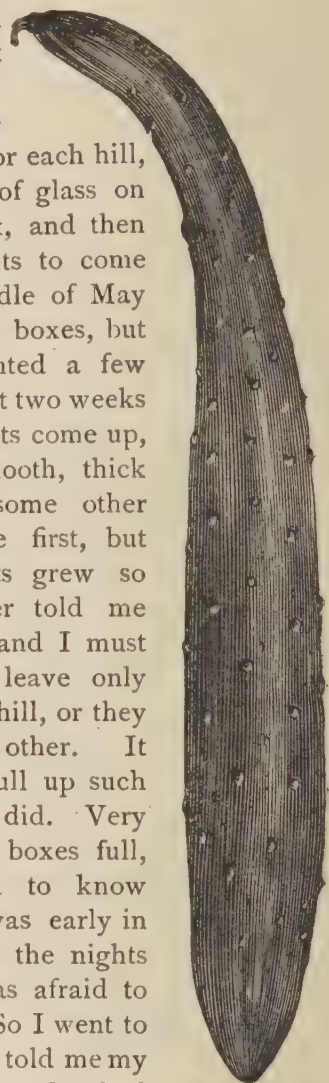
THE FLOWER GARDEN.—Neatness is one the charms of the garden. Tie up the half-fallen stems that have been rudely blown out of position by the winds; cut off the withering blooms, keep the weeds from coming into sight, provide supports for weak but tall-stemmed plants, like the *Dahlia* and *Tuberose*. Raise as many flowers as possible on a given space, have as many in bloom at a time as you can, and give away as many as you can.

A LONG CUCUMBER.

MR. VICK :— Last summer I thought I would try to grow some long, foreign Cucumbers, such as I had seen described in some of your books. I bought a paper of seed of the *Swan Neck*, because that sounded like the longest, and made three hills. Before putting the seed into the ground, I got a basket of chicken manure from the chicken house, and mixed a lot of it with the soil for each hill. The places I manured were five feet across, because I thought the roots would reach as far as this, but I found afterwards they went a great deal farther.

After planting the seed, I made a box for each hill, and put two lights of glass on the top of each box, and then watched for the plants to come up. It was the middle of May when I finished the boxes, but the seeds were planted a few days before. In about two weeks I saw the young plants come up, with two great smooth, thick leaves, and soon some other leaves, not like the first, but rougher. My plants grew so large that a gardener told me they were too close, and I must pull up some and leave only three plants in each hill, or they would spoil each other. It seemed a shame to pull up such nice plants, but I did. Very soon they filled the boxes full, and I was troubled to know what to do, for it was early in June, and sometimes the nights were cold, and I was afraid to take the boxes off. So I went to the gardener who had told me my plants were too close, and asked what I should do. He told me to put a stone under each corner and let the vines run out, which was better than taking the boxes off altogether. I did so, and kept them in that way for several weeks, until most the last of June. Then I removed the boxes and the only trouble was to give water. I tried one hill without any watering, and found that the leaves curled and the plants didn't grow much, so I was sure watering was right, and every other evening, in dry weather, I gave my Cucumbers a good soaking, and they seemed glad to get a good drink after a hot day.

I had almost forgotten to say that I came near losing one box of plants, for the sun was



so hot it burnt the edges of the leaves like fire, before I was aware of it. My good friend, the gardener, told me to open the glass a little for air, and also to throw a little dirt over the glass bright, sunny days. After that I had no trouble. But the Cucumbers, they were big ones; I had one twenty inches long, and a good many nearly as long. Some people said they were not good to eat—only Gourds—but they were just as good as any Cucumbers, and perfect wonders for size. They had but very few seeds. I tried to ripen some for seed, but guess it was not warm enough. I had lots of pleasure with my Cucumbers, and sent two to our fair, and gave some away, and a good many people asked me for seed, but I didn't have any.—GEO. N. C.

BOTANY FOR LITTLE FOLKS.

Young Asparagus shoots, as they first spring up out of the ground, present only some insignificant, scale-like forms as leaves, which appear to be of little importance for the usual purpose of leaves, that of preparing the crude sap for the formation of the tissues of the plant. On the other hand, it is easy to suppose that the cellular tissue just beneath the epidermis, or skin, of the soft, succulent stem in this case, and at this stage of growth, acts in the ordinary capacity of leaves, and elaborates and prepares the sap for its final cell formation. In the plants of the Cactus family there are no developed leaves, and their office is performed by the cellular tissue, or green bark.

The scales of the Asparagus are the true leaves, as is indicated by their position and relation to the branches. Examine any common plant, or tree, and it will be seen that buds are produced at the axils of the leaves, and when these start into growth they become branches. If, now, we look at any older stem of Asparagus, we shall perceive that in all cases the branches spring from the axils of the scaly leaves; and more, at the bases of the smaller branches, and in the axils of the scales, the peduncles of the flowers are inserted, as we also see them in other plants, at the axils of the leaves; thus, by analogy, it is conclusively evident that the scales are the true leaves. What shall we say then about the little green,

thread-like organs growing along the finer stems, and usually called the leaves? Look carefully at the point where they start, with a

lens if necessary, and in every case we shall find the little scale, and since we have concluded this to be a veritable leaf, the little threads seen growing in the axils can really be nothing but branchlets. But the most careless observer cannot fail to understand that these thread-like branchlets serve the purpose of leaves, even as they are so generally considered. Now, however, we are able to under-



ASPARAGUS, BRANCHING STEM.

stand that they are branches, taking the place, or rather, performing the functions, of leaves. If we recur to the plant as it appears when it first starts from the ground, with its scaly leaves, too small and too imperfectly organized to discharge the functions of leaves, and find the duties of the leaves performed, as already noticed, by the green bark, or cellular tissue, and trace the plant along in its growth, we perceive that from first to last it depends for its vegetative processes upon its stem and branches, which latter ultimately ramify into the little thread-like bodies commonly called the leaves.



MYRSIPHYLLUM
ASPARAGOIDES.



RUSCUS ACULEATUS
SHOWING FLOWERS.

The Asparagus is a member of the Lily family, and in respect to the curious part played by its branches and the inefficiency of its leaves, it is matched by another member of the same family. We now refer to the plant so commonly cultivated for ornament in greenhouses and windows, popularly known as Smilax, but whose true name is Myrsiphyllum asparagoides, or the Asparagus-like Myrsiphyllum. A view

ASPARAGUS.
YOUNG SHOOT.

of a small piece of which is shown in the engraving.

When this plant first springs up from the seed or the root, it has only some little scales, and the stem appears like that at the lower part of the engraving here given; but after a while what appear to be leaves come in the axils of the scales, and it is the beauty of these so-called leaves for which the plants are raised. As we have seen with the *Asparagus*, so with this plant, the little scales are the true leaves, but worthless for the purposes of leaves, and in their axils are produced some leafy branches having the appearance of leaves, and doing their work. We know that these organs are properly branches, because they occupy the place of branches and because they differ from true leaves in their position in relation to the



BRANCH OF *RUSCUS ACULEATUS*.

stem. To make it plain, it is necessary to say that leaves are so placed on stems that, as a rule, one surface faces towards the ground and the other upwards towards the sky; but the leafy branches of the *Smilax* assume, or tend to assume, a vertical position, with one edge toward the earth and the other uppermost, thus differing from the position assumed by leaves. Perhaps a clearer idea may be formed if we regard the midrib of the blade the branch, and the portion of the blade on each side as a wing, thus considering the whole organ as a winged branch. Some of our young readers may enquire why these organs, if they are branches, do not continue to branch. The only answer that can be given is that, in the case of the *Smilax*, the plant ceases its growth at this stage; but this is not so of necessity, and perhaps if

one of these leafy branches, or so-called leaves, could be seen again branching one might be fully satisfied that the anatomy of these organs is quite understood. Such a subject, therefore, we now introduce to you; it is a common plant of England and other parts of Europe, commonly known as Butcher's Broom, for the reason that the branches of it are tied together to a handle, forming a broom with which butchers sweep their stalls. Its botanical name is *Ruscus aculeatus*, and a large branch of it is shown drawn to a small scale. It is a shrubby evergreen plant, growing from one to three feet high. Like the other plants just considered, it is a member of the Lily family. Its true leaves are little scales, like those of the *Asparagus* and the *Smilax*. In the axils of the scales are leafy branches, and on the midrib of the leafy part is borne the flower, as clearly shown in the last engraving on the previous page. Without further particularizing, it is only necessary to say that we understand a flower to be a little branch with transformed leaves. Here, then, we have the leafy branch again branching, showing very conclusively the true nature of the leafy part. This subject is full of interest, and numerous questions are suggested which cannot now be investigated, but we shall henceforth be enabled to look upon *Asparagus* and *Smilax* with far more than ordinary interest.

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